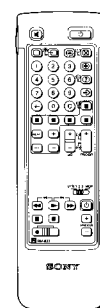
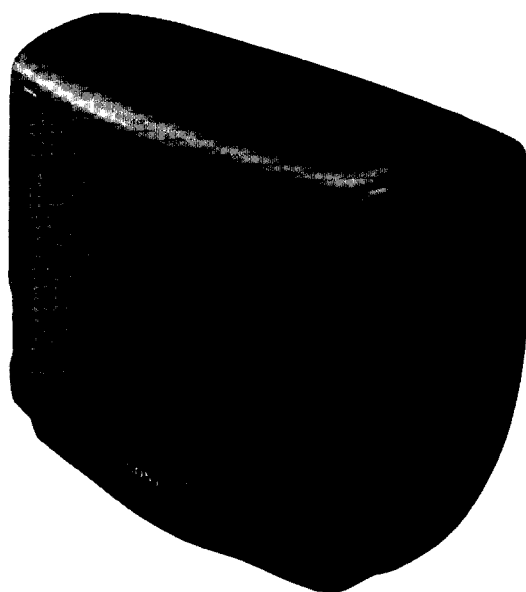


# SERVICE MANUAL

# BE-3B CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-B2531A	RM-833	Italian	SCC-G81Q-A	KV-B2531D	RM-833	AEP	SCC-G77Q-A
KV-B2533B	RM-833	French	SCC-G85N-A	KV-B2533E	RM-833	Spanish	SCC-G82P-A



TRINITRON® COLOUR TV  
**SONY®**

ITEM MODEL	Television System	Stereo System	Channel Coverage	Color System
Italian	B/G/H	GERMAN Stereo	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1): S1-S41 CABLE TV (2): S01-S05, M1-M10 ,U1-U10 ITALIA VHF: A-H2	PAL NTSC 3.58/NTSC 4.43 (Video In)
French	B/G/H, L, I	GERMAN/NICAM Stereo	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1): S1-S41 CABLE TV (2): S01-S05, M1-M10 ,U1-U10 ITALIA VHF: A-H2 SECAM L VHF: F02-F10 UHF: F21-F69 CABLE(France) VHF: B-Q UHF: S21-S41 I UHF: B21-B69	PAL, SECAM NTSC 3.58/NTSC 4.43 (Video In)
AEP	B/G/H, D/K	GERMAN Stereo	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1): S1-S41 CABLE TV (2): S01-S05, M1-M10 ,U1-U10 ITALIA VHF: A-H2 SECAM D/K VHF: R01-R12 UHF: R21-R60	PAL, SECAM NTSC 3.58/NTSC 4.43 (Video In)
Spanish	B/G/H	GERMAN/NICAM Stereo	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1): S1-S41 CABLE TV (2): S01-S05, M1-M10 ,U1-U10 ITALIA VHF: A-H2	PAL, SECAM NTSC 3.58/NTSC 4.43 (Video In)

MODEL	Italian	French	AEP	Spanish
Power Consumption	88W	88Wh	87W	87W

### Specifications

Picture tube Super Trinitron  
Approx. 63 cm (25 inches)  
(Approx. 59 cm picture measured diagonally)  
110° -deflection

#### Input/Output Terminals

##### [REAR]

- ➔ 1 21-pin Euro connector (CENELEC standard)
  - Inputs for audio and video signals
  - inputs for RGB
  - outputs of TV video and audio signals
- ➔ 2/➔ 2 21-pin Euro connector
  - inputs for audio and video signals
  - inputs for S video
  - outputs for audio and video signals (selectable)

##### [FRONT]

- ⊖3 Video input - phono jack
- ⊖3 Audio inputs - phono jacks
- ⊖3 S video input - 4-pin DIN
- Ω Headphone jack - Stereo minijack

Sound output 2x30W (Music power)  
Approx. 663 x 506 x 507 mm  
Weight Approx. 36 kg

Supplied accessories RM-833 Remote Commander (1)  
IEC designation R6 battery (1)

Other features Fastext/TOP-Text  
Nicam

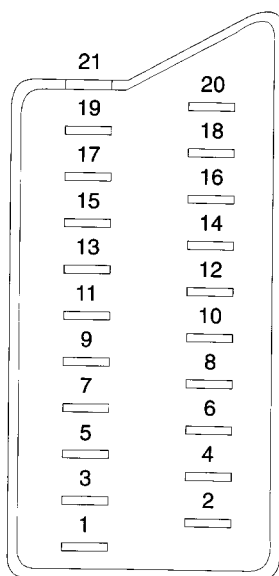
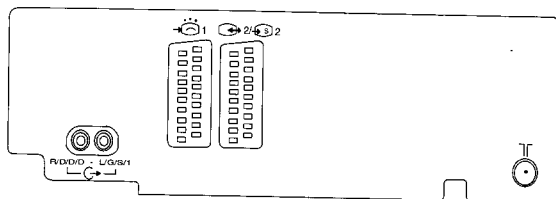
##### [RM-833]

Remote control system infrared control  
Power requirements 1.5V dc  
1 battery IEC designation  
R6 (size AA)  
Dimensions Approx. 65 x 222 x 21 mm (w/h/d)  
Weight Approx. 157g (Not including battery)

**Design and specifications are subject to change without notice.**

Model name Item	KV-B2531A	KV-B2533B	KV-B2531D	KV-B2533E
Pal Comb	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	OFF	OFF
Scart 1	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON
Scart 4	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF
AKB in 16:9 mode	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON
Norm I	OFF	ON	OFF	OFF
Norm D/K	OFF	OFF	ON	OFF
Norm AUS	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF
TOP-Text	ON	ON	ON	ON
Nicam stereo	OFF	ON	OFF	ON
Language Preset	Italian	French	German	Spanish

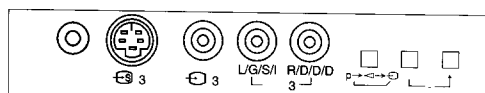
21 pin connector (→ 1 / 2)



Pin No	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance: less than 1kohm*
2	○	○	Audio input B (right)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
3	○	○	Audio output A (left)	Standard level: 0.5Vrms Output impedance: less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
7	○	●	Blue input	0.7V±3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5—12V): Part mode Low state (0—2V): TV mode Input impedance: More than 10kohms Input capacitance: Less than 2nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal: 0.7V±3dB, 75ohms, positive
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (blanking)	
15	○	—	Red input	0.7V±3dB, 75ohms, positive
	—	○	(S signal) chroma input	0.3V±3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1—3V) Low state (0—0.4V) Input impedance: 75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V±3dB, 75ohms, positive Sync: 0.3V(-3, +10dB)
20	○	—	Video input	1V±3dB, 75ohms, positive Sync: 0.3V(-3, +10dB)
	—	○	Video Input/Y (S signal)	1V±3dB, 75ohms, positive Sync: 0.3V(-3, +10dB)
21	○	○	Common ground (plug, shield)	

○ Connected ● Not Connected (open) \* at 20Hz - 20kHz

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm , positive Sync. 0.3V -3/+10 dB
4	C (S signal) input	0.3V ± 3dB 75 ohm , positive Sync.





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**CAUTION**

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

**WARNING !!**

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.  
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

**SAFETY-RELATED COMPONENT WARNING!!**

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.


**ATTENTION**

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

**ATTENTION !!**

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

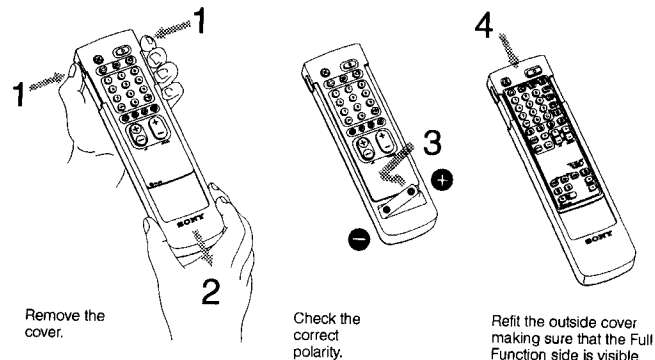
**ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!**

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

## SECTION 1 GENERAL

### Getting Started

#### Inserting the Battery Into the Remote Commander



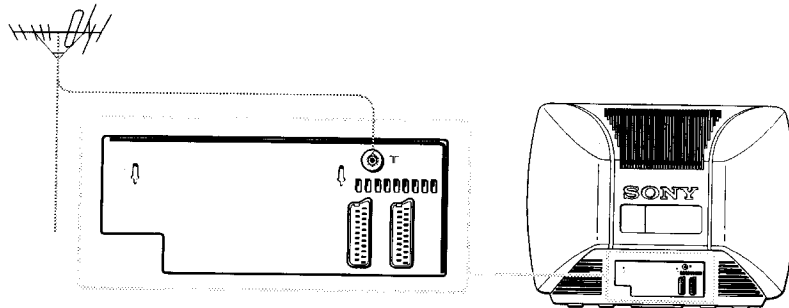
#### About Battery Life

Under normal operation, a battery will last up to half a year.

Always remember to dispose of used battery in an environmental friendly way.

#### Connecting the Aerial

Connect the aerial to the "T" socket at the rear of the TV.  
(cable not supplied)



The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

### Choosing a Language

(See inside of front cover and back cover)

- 1 Depress **⏻** on the TV.  
The TV turns on. If the standby indicator **⏻** on the TV is lit, press **⏻** or any number button **1** on the Remote Commander.
- 2 Press **MENU** on the Remote Commander.  
The SELECT LANGUAGE screen appears.
- 3 Press one of the colour buttons **1** on the Remote Commander to select a language (Press the white button **1** to display other language alternatives). The SELECT LANGUAGE screen clears and all subsequent menus appear in the chosen language.



**Note:** From the second time when you turn on the TV, the MENU screen appears instead of the SELECT LANGUAGE screen. Press the yellow button **1** then press the white button **1** to redisplay the SELECT LANGUAGE screen.

### Tuning in to Channels

You can tune in up to 100 channels to programme positions either automatically or manually.

**auto tuning:** A single button press allows all receivable channels to be tuned. Use if you are unfamiliar with the channel numbers of stations.

**manual tuning:** Use if you are familiar with the channel numbers of stations.

Choose the more appropriate way for you.

#### Tuning in to Channels Automatically

There are two possibilities for auto tuning;

A. On the TV: hold down **⏻** **1** on the front of the TV for 2 seconds

**Note:** The button **⏻** **1** for Automatic Presetting of channels is protected to prevent accidental usage. Use the tip of a pencil to press it.

B. On the Remote Commander: as follows

1 Press **MENU**.

2 Press the white button **1**.

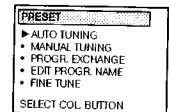
3 Hold down the red button **1** for 2 seconds,

**Note:** Press the green button **1** to cancel.

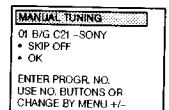
#### Tuning in to Channels Manually

1 Press **MENU**.  
The MENU screen appears.

2 Press the white button **1** to select **PRESET**.  
The PRESET screen appears.



3 Press the green button **1** to select **MANUAL TUNING**.  
The MANUAL TUNING screen appears.



#### 4 Press the number buttons 1 or MENU +/- 2 to select a programme position.

If you use the number buttons 1, enter a double-digit number. (e.g. for programme number 4, first press 0, then 4)

#### 5 Press the green button 3.

**Note:** Use MENU +/- 2 to select TV system. You can alternatively select input sources which may be assigned to programme positions. The display changes as follows:

B/G → D/K → AV1 → RGB → AV2 → YC2 → AV3 → YC3

MANUAL TUNING  
01 B/G C21 -SONY  
• OK  
SELECT SYSTEM/INPUT  
CHANGE BY MENU +/-

#### 6 Press the green button 3.

**Note:** If a video input source is selected in step 5, this is now stored.

Refer to step 4 to tune other programme positions.

MANUAL TUNING  
01 B/G C21 -SONY  
• C/S  
• OK  
ENTER CHANNEL NO.  
USE NO. BUTTONS OR  
SEARCH BY MENU +/-

#### 7 If you have selected B/G in step 5, press the red button 4 to select C (regular channel) or S (cable channel).

#### 8 Press the number buttons 1 or MENU +/- 2 to select the channel number.

If you use the number buttons 1, enter a double-digit number. (e.g. for channel 23, first press 2, then 3)

#### 9 Press the green button 3 to store.

**Note:** If you want to preset other channels, repeat steps 4 to 9.

#### 10 Press MENU 2 twice to return to the normal screen.

**Note:** You can skip unused programme positions when selecting programmes with the PROG +/- buttons 1. Press the red button 4 to skip in step 4. However, the skipped programmes may still be called up when you use the number buttons.

## Basic TV Operations

### Turning the TV on and off

**Turning on**  
Depress 1 on the TV.

### Turning off temporarily

Press 1 on the Remote Commander. The TV enters standby mode and the standby indicator 1 on the front of the TV lights up.

### Turning on again

Press 1, PROG +/- 1, or one of the number buttons 1 on the Remote Commander.

### Turning off completely

Depress 1 on the TV.  
**Note:** It is recommended to use 1 to turn off the TV. This could help you save energy.

### Selecting TV Programmes

Press PROG +/- 1 or press the number buttons 1.

### To select a double-digit number

Press +/- 1, then the number buttons 1.

### Adjusting the Volume

Press 1 +/- 1.

### Muting the Sound

Press 1.  
To resume normal sound, press 1 again.

### Displaying the On-screen Indications

Press 1 once to display the on-screen indications. Press again to make the indications disappear.

### Operating the TV Using the Buttons on the TV

With the buttons on the TV, you can adjust or select the functions as follows:

Press 1 +/- 1 to adjust the volume.  
Press P +/- 1 to select programme numbers or to turn the TV on from the standby mode.  
Press 1 to select the input source.  
Press 1 to preset channels automatically.

## Advanced TV Operations

### Operating the Menu System

You can adjust picture and sound, preset channels to programme positions and utilise other convenient features by using the following menu system.

Press:	to:
1 MENU 1	enter the MENU screen
2 a colour button 1	select an item you want to change (The selected item is marked by a triangle.)
3 MENU +/- 1	change (or adjust) the contents of the item
4 MENU 1	return to the MENU screen
5 MENU 1 again	return to the normal screen
Press MENU 1 once or twice whenever you want to return to the normal screen.	

**Note:** When selecting menus, the picture becomes darker. If, however, an item in the PICTURE ADJUSTMENT menu is selected, normal level of TV picture is restored to allow the best adjustment.

## Adjusting the Picture and Sound

Although picture and sound are adjusted at the factory you can adjust them to suit your own taste.

### 1 Press MENU 1.

The MENU screen appears. MENU

### 2 Press the red button 4 to select PICTURE or the green button 3 to select SOUND.

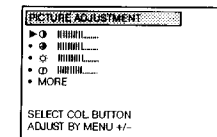
### 3 Press the respective colour button 1 to select an item.

### 4 Press MENU +/- 1 to adjust.

### 5 Press MENU 2 twice or wait until the menu displays disappear automatically to return to the normal screen.

### PICTURE ADJUSTMENT

(First Page)



Press colour button	Effect
<b>Red:</b> For Picture 1	Less —+— More
<b>Green:</b> For Colour 1	Less —+— More
<b>Yellow:</b> For Brightness 1	Darker —+— Brighter
<b>Blue:</b> For Sharpness 1	Softer —+— Sharper
<b>White:</b>	Next page of PICTURE ADJUSTMENT

## PICTURE ADJUSTMENT

(Second Page)

PICTURE ADJUSTMENT	
► COLOUR TONE NORMAL	
• FORMAT NORMAL	
• ROTATION NORMAL	
• B&W NORMAL	
• BACK	
SELECT COL. BUTTON CHANGE BY MENU +/-	

Press colour button	Effect
<b>Red:</b> For Colour Tone	Normal ⇒ Warm (reddish colour tone) ⇒ Cool (blueish colour tone)
<b>Green:</b> For Format	Normal: Normal setting 16:9 Wide screen effect
<b>Yellow:</b> For Picture Rotation (only for KV-B2931D)	Normal: Normal setting -5 ~ +5: Adjust the picture slant which may be caused by the earth magnetism
<b>Blue:</b> For Hue control (only for NTSC video signals)	Reddish ——— Greenish
<b>White:</b>	Back to first page of PICTURE ADJUSTMENT

**Note:** Press →←→ on the Remote Commander to reset to the factory preset levels for picture and sound.

## SOUND ADJUSTMENT

(First Page)

SOUND ADJUSTMENT	
► SOUND	
• VOLUME	
• TREBLE	
• BASS	
• MORE	
SELECT COL. BUTTON ADJUST BY MENU +/-	

Press colour button	Effect
<b>Red:</b> For Volume	Less ——— More
<b>Green:</b> For Treble	Less ——— More
<b>Yellow:</b> For Bass	Less ——— More
<b>Blue:</b> For Balance	More left — more right
<b>White:</b>	Next page of SOUND ADJUSTMENT

## SOUND ADJUSTMENT

(Second Page)

SOUND ADJUSTMENT	
► SPACE SOUND OFF	
• LOUDNESS OFF	
• STEREO	
• RESET	
• BACK	
SELECT COL. BUTTON CHANGE BY MENU +/-	

Press colour button	Effect
<b>Red:</b> For Space Sound	OFF: normal sound ON: for a special acoustic sound effect
<b>Green:</b> For Loudness	OFF: normal sound ON: when listening to low volume sound
<b>Yellow:</b> For Stereo/Dual	Stereo ⇒ Mono A (left channel) ⇒ Mono B (right channel) ⇒ Mono
<b>Blue:</b> For Reset	Resets picture and sound to the factory preset levels.
<b>White:</b>	Back to first page of SOUND ADJUSTMENT

**Note:** Press →←→ on the Remote Commander to reset to the factory preset levels for picture and sound.

## Using Special Features

With your TV you can utilise special features such as Parental Lock or Sleep Timer.

- 1 Press **MENU**.  
The MENU screen appears.
- 2 Press the yellow button to select **FEATURES**.
- 3 Press the respective colour button to select an item.
- 4 Press **MENU +/-** to change.
- 5 Press **MENU** twice or wait until the menu displays  
disappear automatically to return to the normal screen.

### FEATURES

FEATURES	
► SLEEP TIMER OFF	
• PARENTAL LOCK OFF	
• TV BUTTON LOCK OFF	
• DEMO MODE	
• LANGUAGE	
SELECT COL. BUTTON CHANGE BY MENU +/-	

Press colour button	Effect
<b>Red:</b> For Sleep Timer (Automatic switch off function)	OFF ⇒ 0:30 ⇒ 1:00 ⇒ 1:30 ⇒ 2:00 (hours) After the selected time the TV set switches itself automatically into standby mode.
<b>Green:</b> For Parental Lock (For preventing children from watching programmes which you consider unsuitable)	OFF: Normal setting ON: The TV-channel you are watching is now blocked. In this way you can prevent undesirable broadcasts from appearing on the screen.
<b>Yellow:</b> For TV Button Lock	OFF: Normal setting ON: The buttons on the TV do not function anymore. (The Remote Commander still operates)
<b>Blue:</b> For Demo Mode	ON: A sequence of menu pictures is displayed. Press any button on the Remote Commander to stop the function.
<b>White:</b> For Language	The SELECT LANGUAGE screen appears.

## Advanced Presetting Functions

### Exchanging Programme Positions

You can exchange the programme positions to a preferred order (example: exchange programme 09 (channel C21) with programme 15 (channel C24)).

- 1 Press **MENU**.  
The MENU screen appears.
- 2 Press the white button.  
The PRESET screen appears.
- 3 Press the yellow button.  
The PROGR. EXCHANGE SCREEN appears.

PROGR. EXCHANGE	
01 B/G C21 - SONY	
• NEXT CHANNEL	
• PREVIOUS CHANNEL	
• STORE	
SELECT COL. BUTTON	

- 4 Press the white button repeatedly until the desired  
programme number (09) appears.
- 5 Press the red or the green button repeatedly until the  
desired channel number (C24) appears.
- 6 Press the white button to store.  
Now the exchange has been completed. Channel C24 is  
tuned in to programme 09 and channel C21 is tuned in to  
programme 15.
- 7 Press **MENU** twice to return to the normal screen.

### Editing Programme Names

In case of channels, which broadcast VPS signals, programme names are usually stored automatically during presetting of channels. You can also edit the programme names up to five letters.

- 1 Press **MENU**.  
The MENU screen appears.
- 2 Press the white button.  
The PRESET screen appears.
- 3 Press the blue button.  
The EDIT PROGR. NAME screen appears.  
The first character flashes.

EDIT PROGR. NAME	
01 B/G C21 - SONY	
• NEXT LETTER	
• STORE	
CHANGE BY MENU +/-	

- 4 Press MENU +/-** to edit the first letter.  
The first letter changes as follows  
A ↔ B ... Z ↔ 1 ↔ ... 9 ↔ "-" (space).

- 5 Press the red button** to move to the next letter.

- 6 Repeat steps 4 to 5, until the fifth letter is chosen.**

- 7 Press the green button**.  
The programme name is stored, and the normal screen appears. To edit another programme name, repeat steps 1 to 7.

### Fine Tuning

You can adjust the receiving conditions by the FINE TUNE function.

- 1 Press MENU**.  
The MENU screen appears.

- 2 Press the white button**.  
The PRESET screen appears.

- 3 Press the white button** again.  
The FINE TUNE screen appears.



- 4 Press MENU +/-** to adjust the receiving condition.

- 5 Press the red button** to store the adjustment, or press the green button not to store.  
Now the normal screen appears. If you have pressed the green button, the fine tuned condition is cancelled once you choose another programme.

**Note:** If the FINE TUNE screen disappears automatically before you press the red button, the fine tuned condition is not stored. Repeat steps 1 to 5.

### Tuning in to a Channel Temporarily

You can tune in to a channel temporarily, even when it has not been preset.

- 1 Press C** on the Remote Commander.  
For cable channels press C twice. The indication "C" (or "S" for cable channels) appears on the screen.

- 2 Enter a double digit channel number using the number buttons (e.g. for channel 23, first press 2, then 3).**  
The channel appears.  
However, the channel is not stored.

## Teletext Operation

TV stations broadcast teletext programmes via the TV channels. For basic operation of teletext, use the simple side of the Remote Commander. For the advanced features of teletext, use the buttons indicated in green on the full function side of the Remote Commander.

### Basic Teletext Operation

#### Switching Teletext on and off

- 1 Select the channel which carries the teletext service you wish to view.**

- 2 Press** to display Teletext.  
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.



- 3 Input three digits for the page number using the number buttons.**  
The numbers are displayed on the screen and the requested page appears in a few seconds.  
**Note:** If you make a mistake, type in any three digits, then re-enter the correct page number.

- 4 Press** to return to the TV mode.

#### Notes:

- To change the teletext channels. First press to return to the TV mode, then repeat steps 1 to 3.
- If the signal of a TV channel is weak, teletext errors may occur.

### Advanced Teletext Operation

#### Using Fastext

With Fastext you can access pages with one button press.

When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.

Press the corresponding colour button on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed in a few seconds.

#### Requesting the Index page

Press. The Index page appears.

#### Accessing the next or preceding page

Press (PAGE -) or (PAGE +). The next or the preceding page appears on the screen.

#### Superimposing the teletext display on the TV picture

Press once if you are in text mode or press twice if in TV mode.

To return to the normal teletext display press twice.



#### Preventing a teletext page from being updated or changed

Press (HOLD). The HOLD symbol appears on the screen and the selected subpage is held until you press to cancel.

#### Enlarging the teletext display

Press once to enlarge the upper half. Press twice to enlarge the lower half. Press again to restore the normal display.



#### Revealing concealed information (e.g. answers to a quiz)

Press (REVEAL). The information is revealed. Press again to conceal the information.

#### Watching TV while waiting for a requested page to be displayed

- 1 Request a new teletext page.**

- 2 Press** (TEXT CL).  
The TV programme is displayed and the symbol is displayed at the top of the page.  
**Note:** When the requested page is available the page number is displayed at the top of the screen.

- 3 Press** to view the page.

#### To cancel the request

Display the teletext page, then press. The request is now cancelled. Press to resume TV mode.

#### Using the Favourite Page system

You can store up to four of your favourite teletext pages per programme with the help of the Favourite page system. In this way you have quick access to the pages you watch frequently.

#### Storing the Favourite Pages

- 1 Select the page you would like to store using the number buttons.**

- 2 Press** twice.  
The colour prompts at the bottom of the screen flash.

- 3 Press any of the colour buttons on the Remote Commander to store the selected page.**  
The page is now stored on this button.

Repeat steps 1 to 3 for the other 3 pages available.

#### Displaying the Favourite pages

- 1 Press**.

- 2 Press the colour button corresponding to the colour prompt onto which the desired page is stored.**  
The page is requested. (It may take a few seconds to be received).

**Note:** Step 1 must be taken before every favourite page selection otherwise the normal Fastext facility operates.

#### Using the Time Function in the TV mode

Press to request the time. Press again to cancel the request.

**Note:** This function is available only when teletext is broadcast.

## Connecting Other Equipment

You can connect optional audio/video equipment to this TV such as VCRs, video disc players, cameras or stereo systems.

Connector	Acceptable input signal	Available output signal
① 1 ② (AV1/RGB)	Audio/video and RGB signal	Audio/video signal from TV Tuner
③ 2/④ 2 ⑤ (AV2/YC2)	Audio/video and S-video signal	Audio/video signal from selected source
⑥ 3/⑦ 3 ⑧ (AV3)	Audio/video signal	No outputs
⑨ 3/⑩ 3 ⑪ (YC3)	Audio/S-video signal	No outputs

To watch a video input picture, press ⑥ ② until the desired video input appears.

To return to the normal TV picture, press ⑥ ② repeatedly or press ① ②.

If you have a decoder, connect it to ① 1 ②.

### Connecting a VCR Using the TV Aerial Terminal

Connect the aerial output of the VCR to the aerial terminal ⑫ of the TV. It is recommended to tune in the VCR signal to programme number "0". For details, see "Tuning in to Channels Manually" on page 20.

### S video input (Y/C input) ③ ⑤

Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals.

Separating the Y and C signals prevents them from interfering with each other and therefore improves the picture quality (especially luminance). This TV is equipped with 2 video input terminals through which these signals can be input directly.

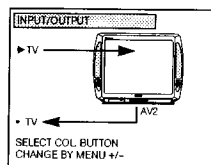
## Checking and Selecting the Input and Output Sources Using the Menu

You can display a menu screen to see which input and output source are selected. You can also change the selecting using this menu.

### Checking the Input and Output Sources

1 Press MENU ⑦.  
The MENU screen appears.

2 Press the blue button ⑥ to select INPUT/OUTPUT.  
The INPUT/OUTPUT screen appears.



### Selecting an Input Signal

Press the red button ① to select INPUT. Press MENU +/- ⑥ to select the desired input source.

You can select among the following sources:

TV ↔ AV1 ↔ RGB ↔ AV2 ↔ YC2 ↔ AV3 ↔ YC3



### Selecting an Output Signal

The ③ 2/④ 2 connector ⑤ outputs the source input from the other connectors. Press the green button ③ to select OUTPUT. Press MENU +/- ⑥ to select the desired output source.

You can select among the following sources:

TV ↔ AV1 ↔ AV2 ↔ YC2 ↔ AV3 ↔ YC3



Note: Press ③ twice or wait until the menu display disappears automatically to return to the normal screen.

## Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control most Sony remote-controlled video equipment such as: Beta, 8 mm or VHS VCRs or video disc players.

### Tuning the Remote Comander to the equipment

1 Set the VTR 1/2/3 MDP selector ⑬ according to the equipment you want to control:

- VTR 1: Beta or VCR
- VTR 2: 8mm VCR
- VTR 3: VHS VCR
- MDP: Video Disc Player

2 Use the buttons ⑭ to operate the additional equipment.

### Notes:

- If your video equipment is furnished with a COMMAND MODE selector; set this selector to the same position as the VTR 1/2/3 MCP selector on the TV Remote Commander.
- If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.
- When you use the ⑮ (record) button, make sure to press this button and the one to the right of it simultaneously.

## Using Headphones

You can utilise headphones. Connect them to the headphone jack ⑯, then the sound from the speakers goes off.

Note: You can't control the sound adjustment except for volume.

## For your Information

### Troubleshooting

Here are some simple solutions to problems which may affect the picture and sound.

#### No picture (screen is dark), no sound

- Plug the TV in.
- Press ① ② on the TV. (If the standby indicator ① is lit, press ① ② or any number button ③ on the Remote Commander.)
- Check if the selected video source is on.
- Turn the TV off for three or four seconds and then turn it on again using ① ②.

#### Poor or no picture (screen is dark), but good sound

- Press MENU ⑦ to enter the MENU screen, and press the red button ①, then adjust ⑧ and ⑨.

#### Good picture but no sound

- Press ① + ②.
- If ① is displayed on the screen, press ① ②.

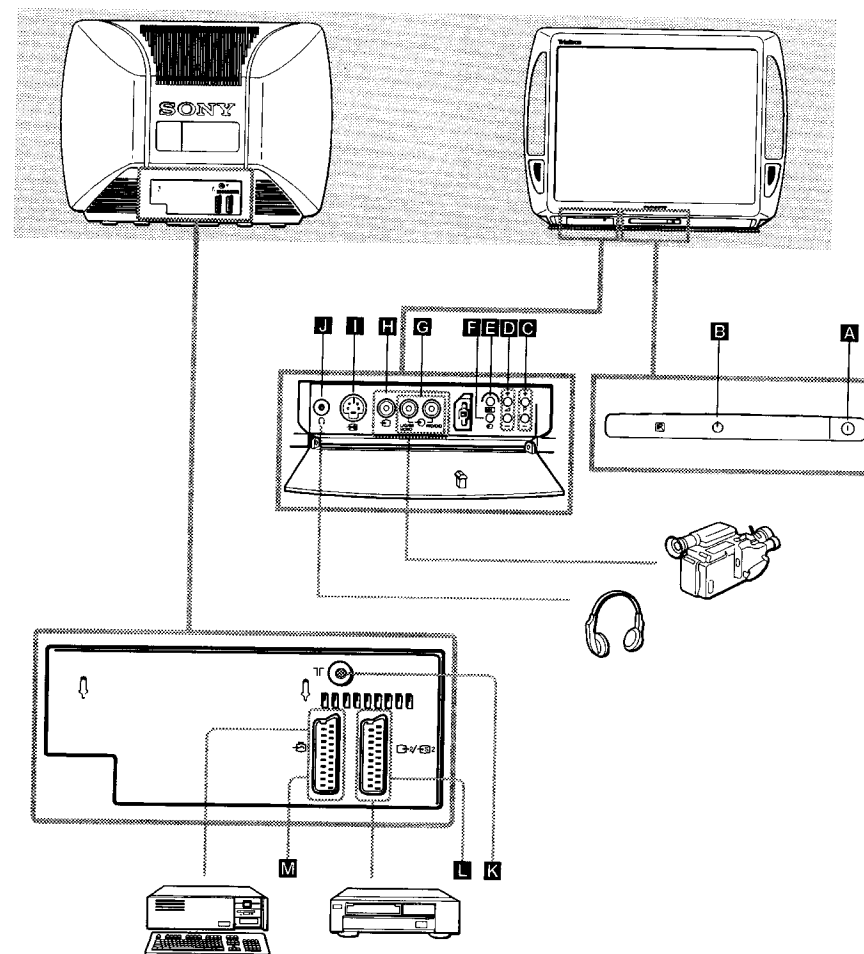
#### No colour for colour programmes

- Press MENU ⑦ to enter the MENU screen, and press the red button ①, then adjust ⑧.

#### Remote Commander does not function

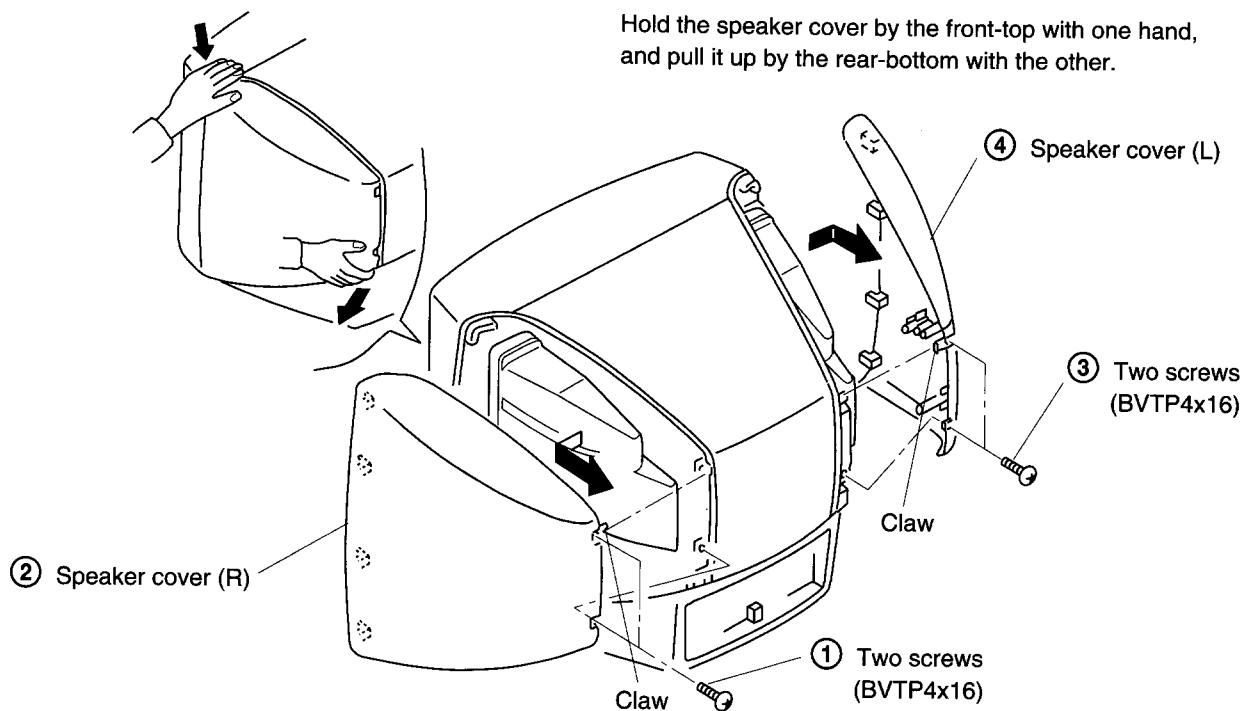
- Replace the battery.

If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

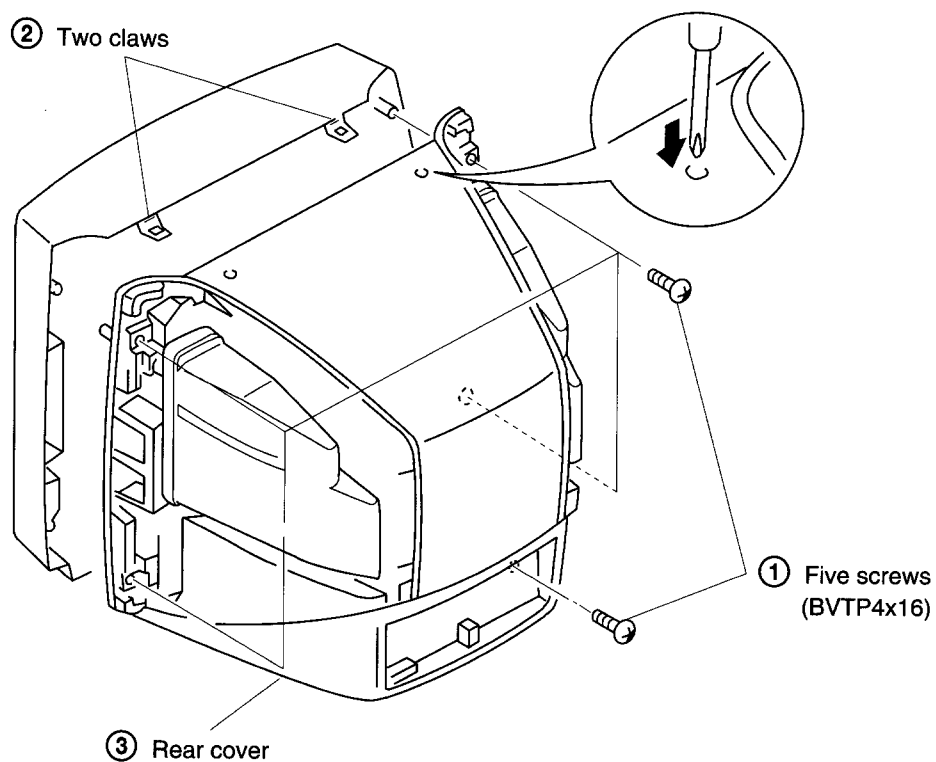


## SECTION 2 DISASSEMBLY

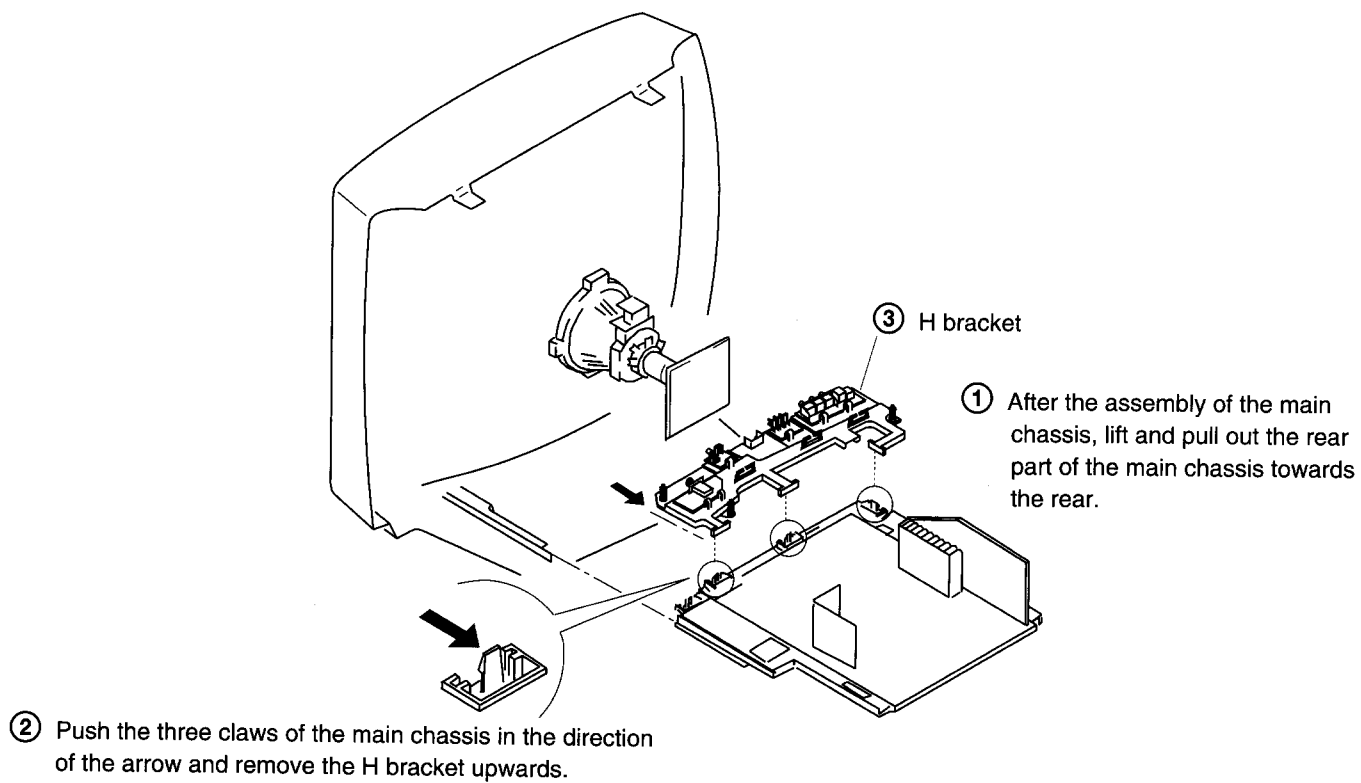
### 2-1. SPEAKER COVER REMOVAL



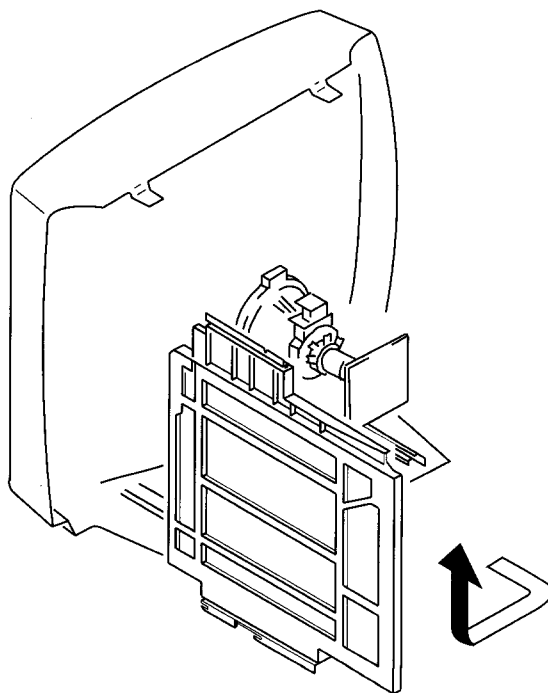
### 2-2. REAR COVER REMOVAL



## 2-3. CHASSIS ASSY REMOVAL

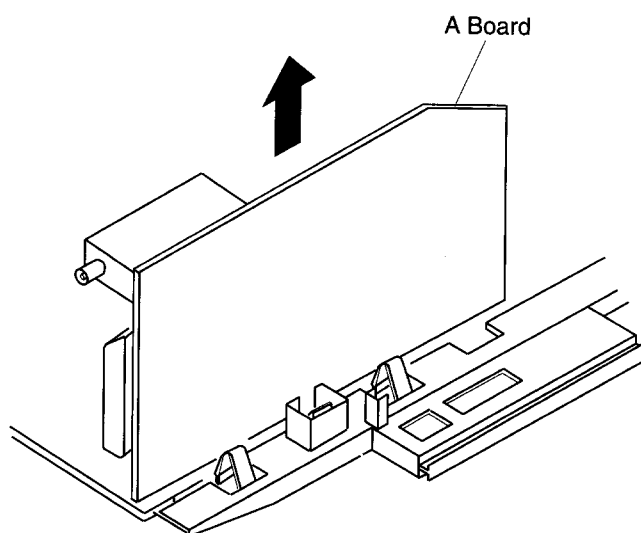


## 2-4. SERVICE POSITION

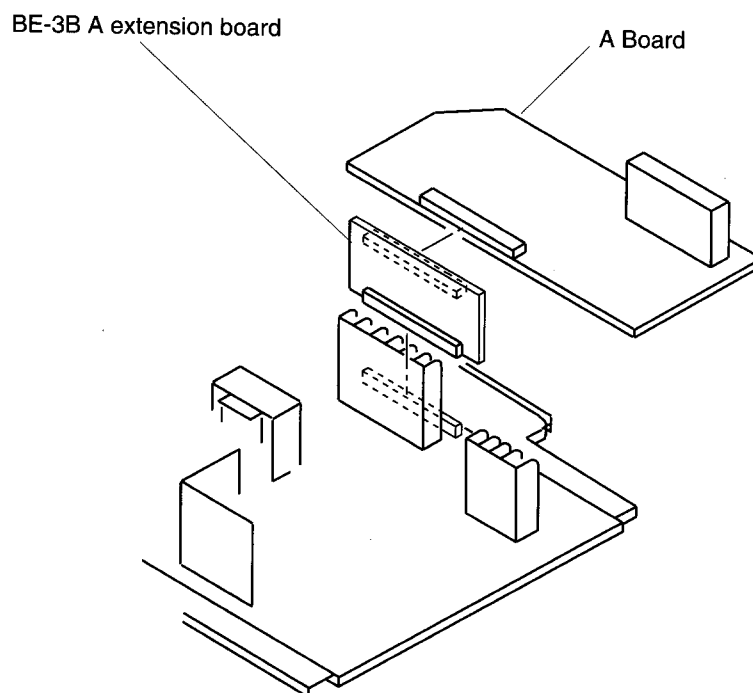




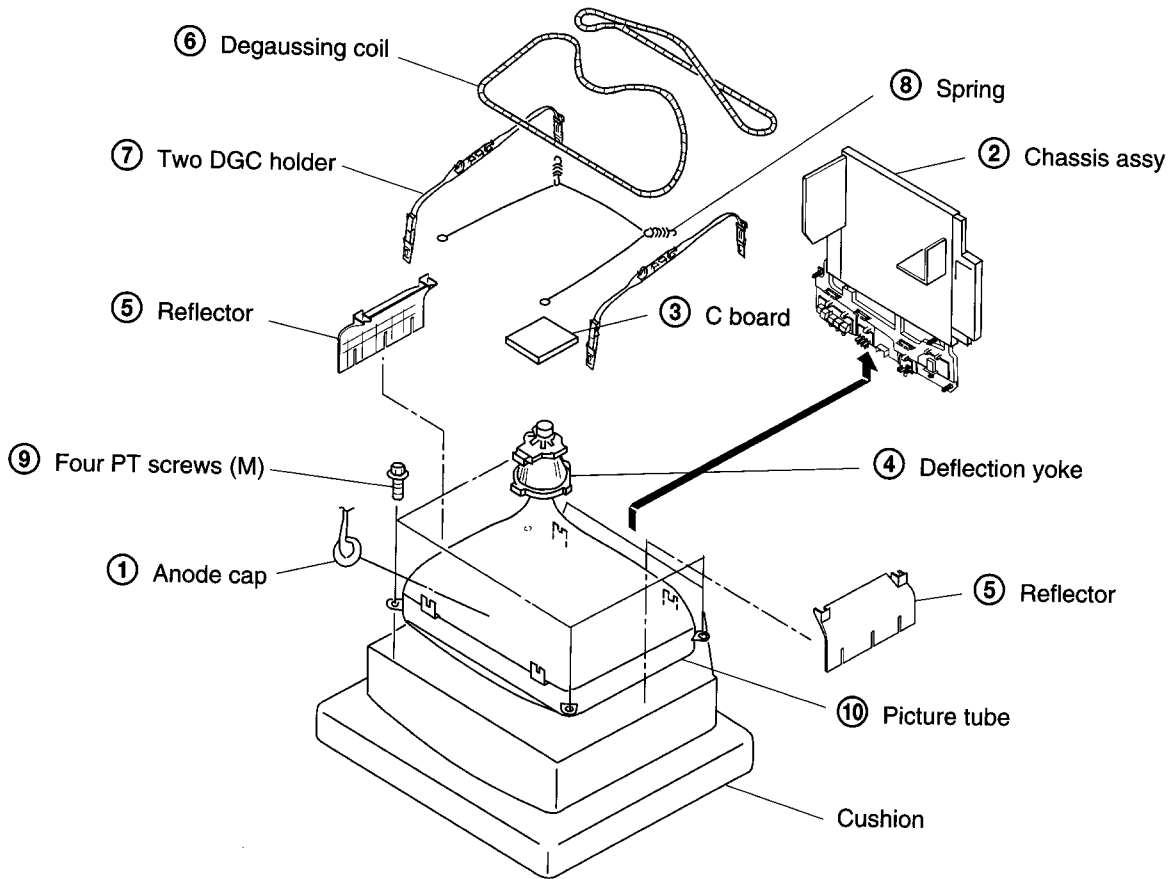
## 2-5. A BOARD REMOVAL



## 2-6. EXTENSION BOARD



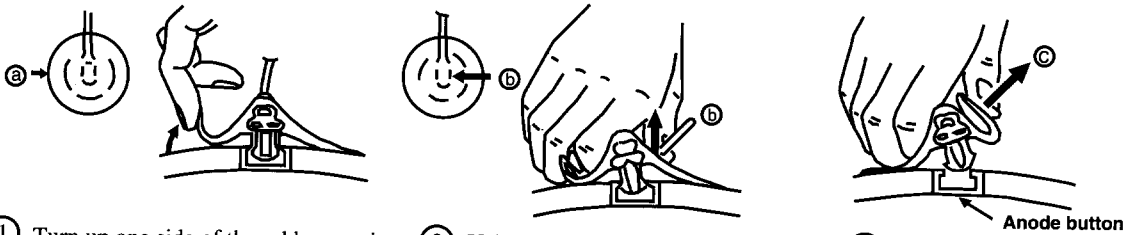
## 2-7. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE-CAP

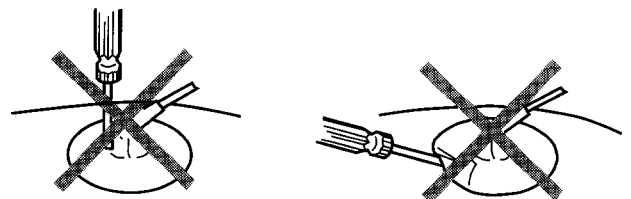
**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

#### \* REMOVING PROCEDURES.



### • HOW TO HANDLE AN ANODE-CAP

- ① Don't damage the surface of anode-cap with sharp shaped material !
- ② Don't press the rubber hardly not to hurt inside of anode-caps !  
A metal fitting called as shatter-hook terminal is built into the rubber.
- ③ Don't turn the foot of rubber over hardly !  
The shatter-hook terminal will stick out or damage the rubber.



## SECTION 3

### SET - UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings :

① Contrast ..... 80% (or remote control normal)  
 ☼ Brightness ..... 50%

- Carry out the following adjustments in this order :
  1. Beam landing
  2. Convergence
  3. Focus
  4. White balance

**Note:** Testing equipment required.

1. Colour bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

#### Preparation:

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

### 3-1. BEAM LANDING

1. Input the white signal with the pattern generator.  
 CONTRAST } normal  
 BRIGHTNESS }
2. Set the pattern generator raster signal to red.
3. Move the deflection yoke forward and adjust with the purity control so that the red is at the centre and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 - 3-3)
4. Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
5. Switch the raster signal to blue, then to green and verify the condition.
6. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
7. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

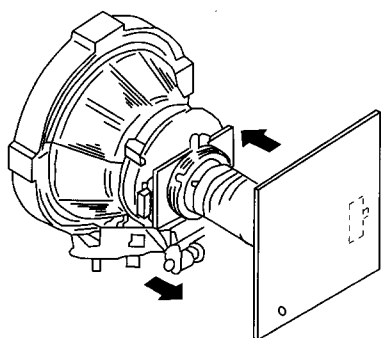


Fig. 3-1

Fig. 3-2

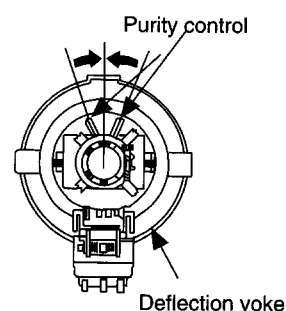


Fig. 3-3

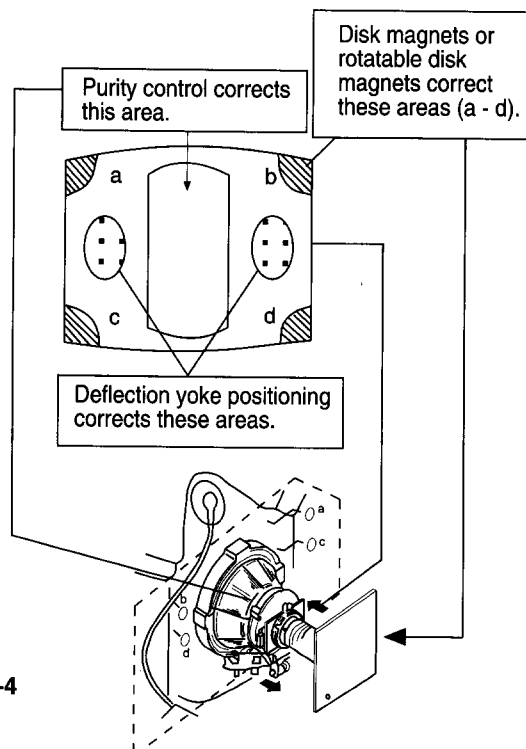
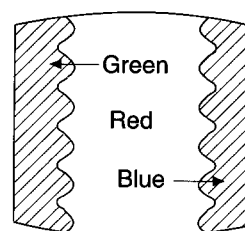


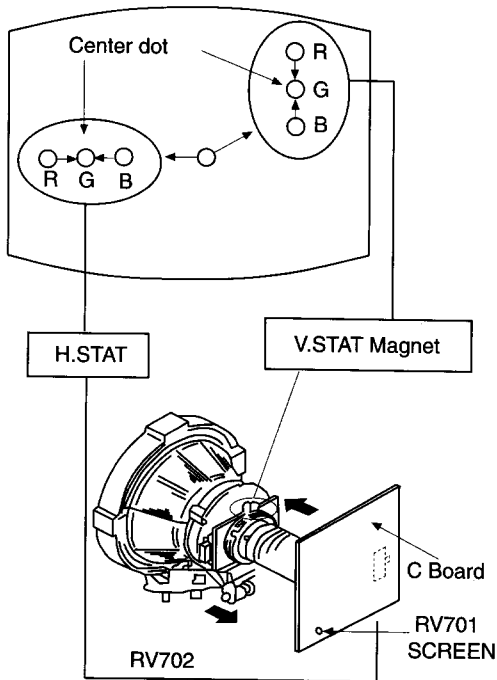
Fig. 3-4

### 3-2. CONVERGENCE

#### Preparation:

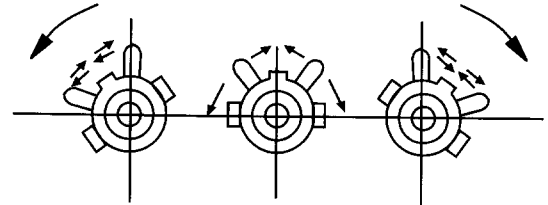
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

#### (1) Horizontal and vertical static convergence

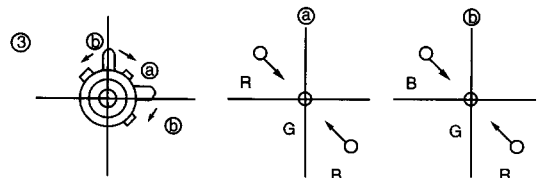
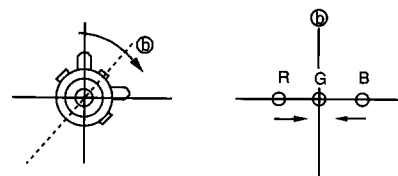
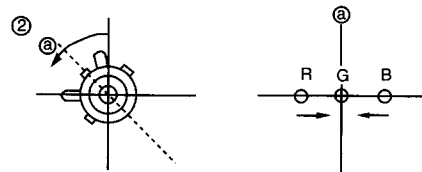
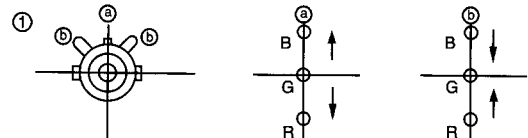


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the centre of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the centre of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.  
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

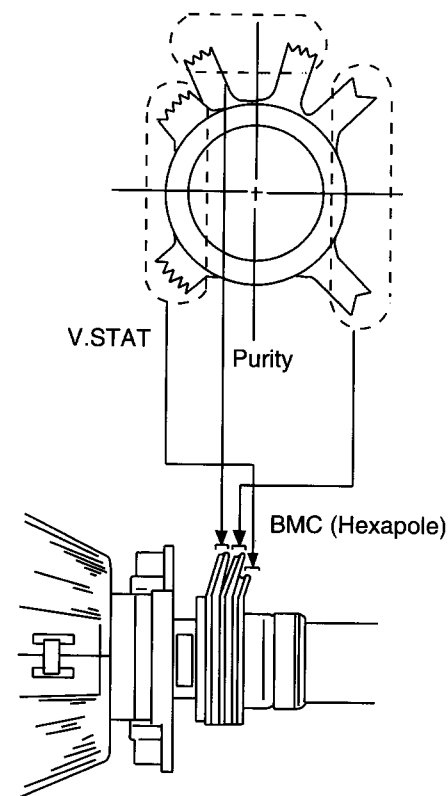
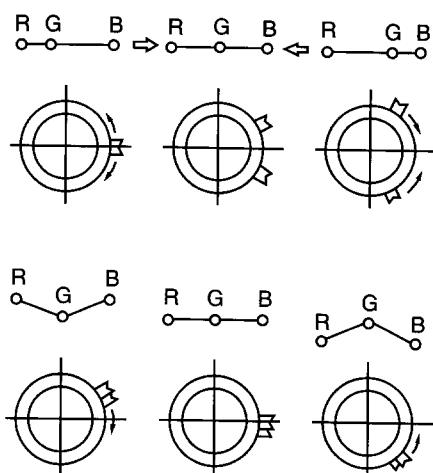
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



4. If the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet

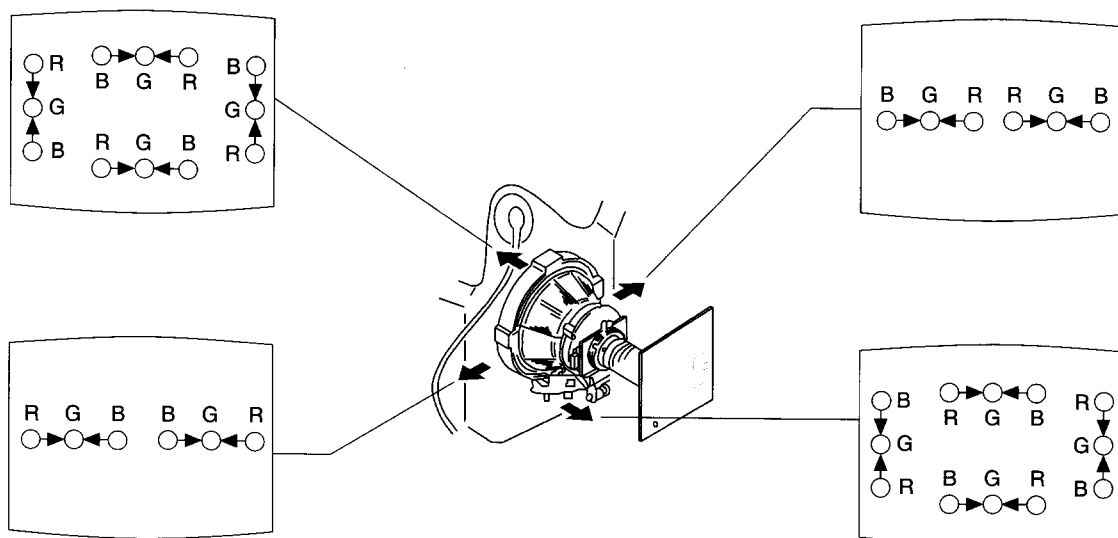


- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.  
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the centre of the screen (by moving the dots in the horizontal direction).

## (2) Dynamic convergence adjustment.

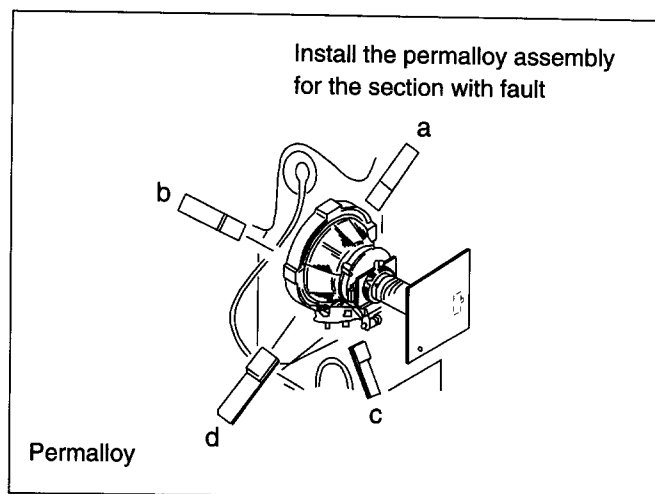
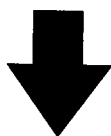
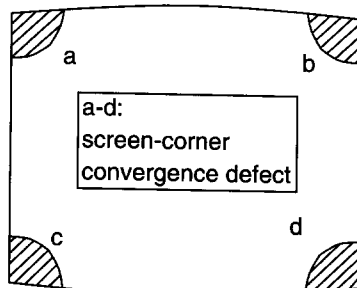
### Preparation:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
- Slightly loosen the deflection yoke screws.
  - Remove the deflection yoke spacer.
  - Move the deflection yoke as shown in the figure below and optimize the convergence.
  - Tighten the deflection yoke screws.
  - Re-install the deflection yoke spacer.

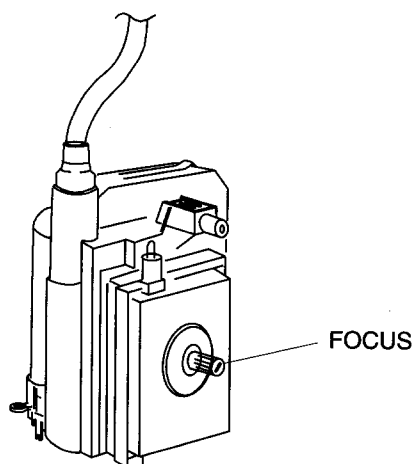


**(3) Screen corner convergence.**

If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.

**3-3. FOCUS**

Adjust the focus to optimize the screen.

**3-4. WHITE BALANCE****Screen G2 Setting**

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 180V DC to the R,G, and B cathodes with an external power supply.
4. While watching the picture, adjust G2 control RV701 (Screen) to the point just before the return lines disappear.

**White balance adjustment**

1. Receive an all-white signal.
2. Enter into service mode. (Refer to the section 4 "Electrical Adjustment" on how to enter service mode.)
3. Select TDA8366 1 on menu.

DEVICE : TDA8366 1

STAT : 12

- ☐ NEXT
- ☐ PREVIOUS
- ☐ OK

USE COLOUR KEYS  
SONY TEST MENU.

4. Press the White button on the Remote Commander to enter into the device Menu.
5. Press the Red button 10 times "Next" "Next" "Next" to select HWB RED, adjust to 32.
6. Press the Red button to select HWB GREEN, adjust with the + and - menu buttons so that the white balance becomes optimum.
7. Press the Red button to select HWB BLUE, adjust with the + and - menu buttons so that the white balance becomes optimum.
8. Press the TV button twice on the Remote Commander to store the data and return to TV operation.

## SECTION 4

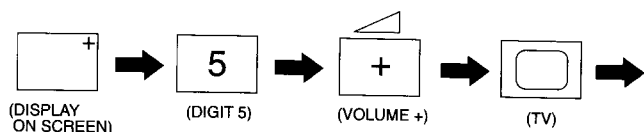
### CIRCUIT ADJUSTMENTS

#### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-833.

##### HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.



"TT" will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.

DEVICE NAME

STAT : xxxx

☐ NEXT

☐ PREVIOUS

☐ OK

USE COLOUR KEYS  
SONY TEST MENU.

4. Press the Red (Next) and Green (Previous) buttons to select the device corresponding to the adjustment item from the table. Then press the White button (OK).

DEVICE NAME

00 ADJUSTMENT : xxx

☐ NEXT

☐ PREVIOUS

SELECT COL.BUTTON  
CHANGE BY MENU +/-

5. Press the Red (Next) or Green (previous) buttons to select the adjustment item. Then press the and buttons to change the data to comply with each standard.
6. Turn off the power to quit the service mode when adjustments are completed.

Initial Conditions for setup of TDA8366, TDA6612 and SAA7283. ( Stereo Models Only )

TDA8366 1	INIT VALUE	TDA8366 2	INIT VALUE
Hue	31	Interlace	00
H Shift	Adj	Sync Mode	00
H Size	Adj	Col Dec	00
Pin Amp	Adj	Vert Div	00
Corn Pin	Adj	Vid ID	00
Tilt	Adj	EHF Track	01
V.Linear	Adj	En V Grd	00
V.Size	Adj	Serv Blk	00
S.Corr	Adj	OVP Mode	00
V.Cent	Adj	Aspect R	00
HWB Red	Adj	Start Freq	00
HWB Green	Adj	Y/C Input	00
HWB Blue	Adj	PAL/NTSC	00
Peaking	8	Xtal PLL	00
Bright	32	Y Delay	07
Colour	32	RGB Blk	00
Picture	37	Noise Cor	00
AGC Set	00	Fast Blk	01
Src Sel 1	00	AFC Wind	00
Src Sel 2	00	IF Sensity	00
Time Con	03	Mod Std	00
Xtal Ind	03	Vid Mute	01
FF Freq	02		

TDA6612	INIT VALUE	TDA6612	INIT VALUE
MPX Per	00	Mute 2	01
Quasi St	00	C1/2LS	00
Bass Exp	00	C1/2KH	00
H Pulse	00	Mono	01
Matrix St	00	Scart	00
Bypass	00	Scart D	00
Vol L Sp	07	AM	00
Vol R Sp	07	SAA7283	INIT VALUE
Vol HP	00	Mon M1/M2	01
PII Sync	00	DM Select	01
Mute 3	01	SSWIT 123	07
Treble	08	Port 2	00
Bass	09	Mute Def	00
X Talk Adj	Adj	AMDIS	00
Mute 1	00	E Max	80
		E Min	01

## 4-2. TEST MODE 2 :

Is available by pressing Test button twice, OSD 'TT ' appears. The functions described below are available by pressing the two numbers. To release the Test Mode 2, press 0 twice, or switch the TV into Stand-by Mode.

00	switch Test Mode 2 off
01	picture maximum
02	picture minimum
03	Volume 35%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Ageing Condition (Volume min., Picture max., Brightness max.
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off)
09	"Menu" Flag request
10	Tenth entry is deleted
11	dummy
12	dummy
13	dummy
14	Forced AV 16:9 detection on/off
15	Read factory setting from NVM Reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last Power Memory)
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM.
17	Preset Label for AV Sources
18	RGB Priority on/off
19	Clear all preset labels
20	Tenth entry is deleted
21	Sub Contrast
22	Sub Colour
23	Sub Brightness
24	Set destination = U RGB Priority = Off
25	Set destination = D RGB Priority = Off
26	Set destination = B RGB Priority = On
27	Set destination = K RGB Priority = Off
28	Set destination = L RGB Priority = Off
29	Set destination = E RGB Priority = Off

30	Tenth entry is deleted
31	Set Destination = A RGB Priority = On
32	dummy
33	Auto AGC
34	N/S Pin Adjust
35	Manual AGC Adjust
36	dummy
37	dummy
38	To Activate Rotation Coil Adjustment
39	'Check Rotation Coil Adjustment
40	Tenth entry is deleted
41	Re-initialise NVM
42	Production use only
43	Initialise Geom Settings
44	Initialise all favorite pages = 100
45	Channel locks = off
46	IR Channel Presetting Mode The channel presetting can be done by a Special IR Transmitter ( Ver 2 and above software only)
47	dummy
48	Set NVM testbyte to 44h
49	Erase the NVM Testbyte (this byte detects already stored NVM's) After selecting this function, switch TV Off and On -> the NVM will be preset by $\mu$ -Controller.

In Test Mode the Menu display is switchable by the Speaker-Off button.

**Note :** For Test Modes 41 - 49 it is necessary to ensure that the TV is set to Prog 59.



**SUB BRIGHTNESS ADJUSTMENT**

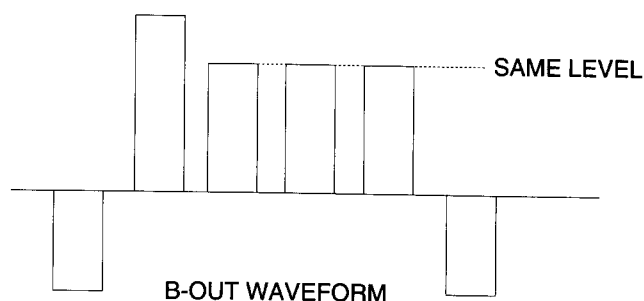
1. Input a Phillips pattern.
2. Enter into service mode and press 23.
3. Adjust data so that 0-IRE of grey scale and CUT-OFF 20-IRE are only slightly visible on screen.

**SUB CONTRAST ADJUSTMENT**

1. Input a video that contains a small 100% area on a Black Background.
2. Enter into service mode and press 01 to have PIC max followed by 21.
3. Connect oscilloscope to pin ① of CN703 (R OUT) and adjust HWB Red data of TDA8366 1 to obtain 2.3Vp-p.

**SUB COLOUR ADJUSTMENT**

1. Input a PAL colour bar signal.
2. Connect an oscilloscope to pin ③ of CN703 (B OUT) on the C board.
3. Enter into service mode and press 22.
4. Adjust data so that the right sides of the waveform are set to the same level.

**STEREO SEPARATION ADJUSTMENT**

1. Input a 1KHz stereo signal to the L-ch and a 400Hz stereo signal to the R-ch.
2. Enter into service mode and select the "Test Menu" to be TDA6612.
3. Select the Stereo Xtalk Adjustment Menu, by using the Red (Next) and Green (Previous) buttons.
4. Monitor the Scart 1 L-channel output and adjust the data so that the R-channel sound is not detected in the L-channel.

**I.F. COIL ADJUSTMENT**

1. Apply a 38.9MHz signal at 100dBuV to the input of SWF101.
2. Receive a channel so that the I.C. is selected for negative modulation.
3. Measure the voltage at the AFT test point and adjust (T101) to obtain 2.4V +/- 0.2V.

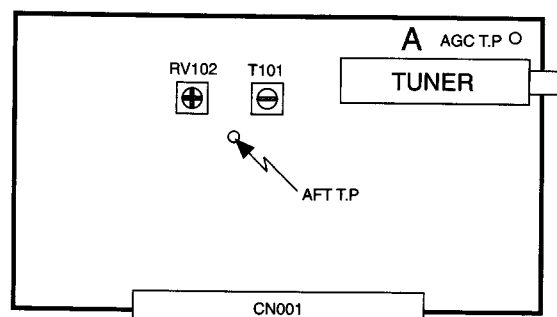
**L, BAND 1 ADJUSTMENT (RV102) - L, STANDARD FOR FRENCH MODELS.**

1. Apply a 33.95MHz signal at 100dBuV to the input of SWF101.
2. Receive a channel so that the I.C. is selected for positive modulation and system L band 1.
3. Measure the voltage at the AFT test point and adjust (RV102) to obtain 2.4V +/- 0.2V.

**Note :** Only adjust RV102 after T101 has been correctly adjusted.

**AGC ADJUSTMENT**

1. Receive an off- air signal.
2. Enter the service mode, ("Test" "Test") and 35.
3. Adjust the data so that there is no snow or cross - modulation visible on the screen.
4. Change the receiving off-air channel, and confirm the above status.

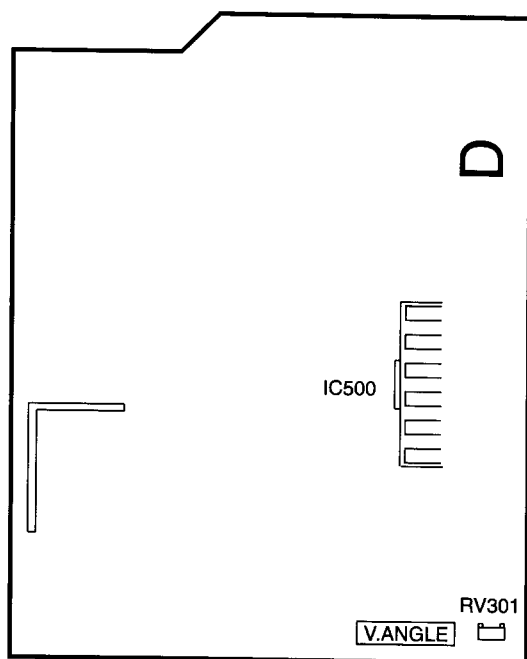


# DEFLECTION SYSTEM ADJUSTMENT

1. Enter into service mode.
2. Select and adjust each item in order to obtain the optimum image.

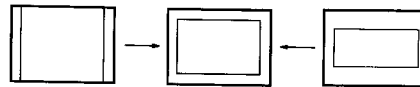
Item No	Adjustment item.	Data Amount
03	H SHIFT	ADJ.
04	H SIZE	ADJ.
05	PIN AMP	ADJ.
06	CORR PIN	ADJ.
07	TILT	ADJ.
08	V LINEAR	ADJ.
09	V SIZE	ADJ.
0A	S CORR	ADJ.
0B	V CENTER	ADJ.

Note : V ANGLE is adjusted by a Variable Resistor on the 'D' Board (RV301)

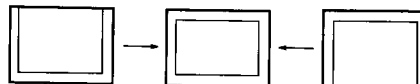


- D Board Component Side -

V SIZE



V CENTER



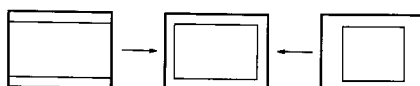
S CORR



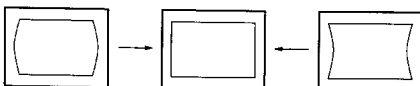
V LIN



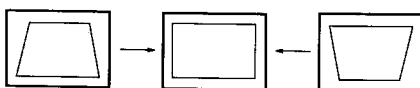
H SIZE



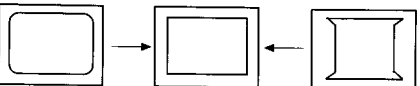
PIN AMP



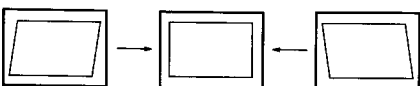
TILT



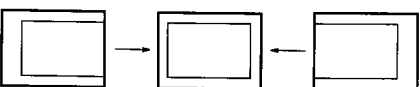
CORR PIN



V ANGLE



H SHIFT



### 4-3. BE-3B SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-3B chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failiure to respond to IIC. In the event of one of these situations arrising the software will first try to release the bus if busy (Failiure to do so will report with continous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1., on fatal errors are reported with this method.

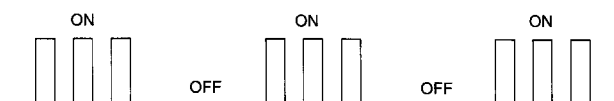
If a fatal error is found the set will simply stay in whichever state it was when the error ocured, but if a non fatal error occurs the set will try to continue operation.

**Table 1**

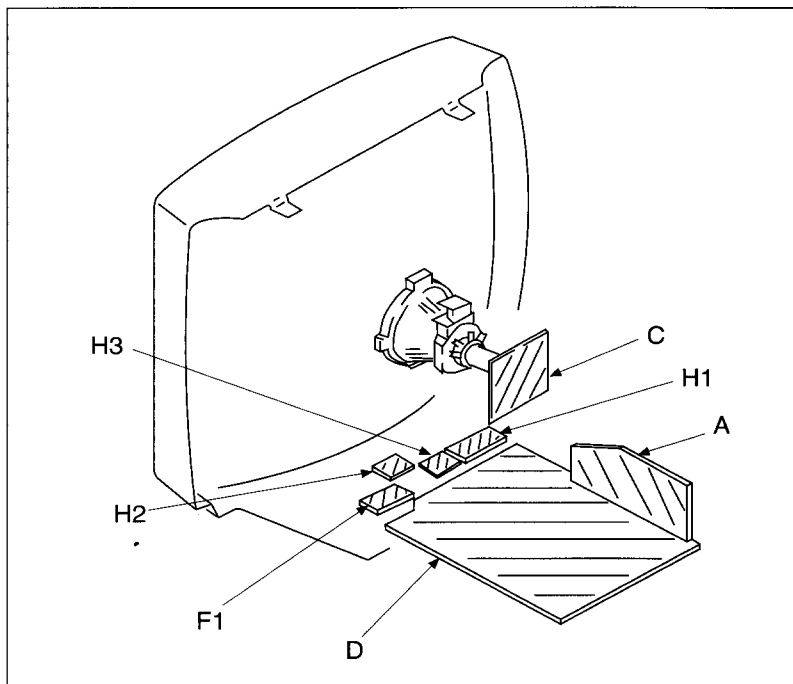
Device	LED Error Count	Fatal Error
NVM	2 .. 9	√
Teletext	10	
Jungle	11	√
Video_sw	12	
Tuner	13	√
Nicam	14	
Audio_cont	15	√

Flash Timing Example : e.g. error number 3.

Stby LED



## 5-2. CIRCUIT BOARDS LOCATION






## 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS


### Note :


- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.  
 $k = 1000$  ,  $M = 1000K$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm


Rating electrical power  $\frac{1}{4}$  W



-  : nonflammable resistor.
-  : internal component.
-  : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- $\perp$  : earth - ground.
- $\text{///}$  : earth - chassis.
- $\text{---}$  : no mounted.

**Note :** The components identified by shading and marked  are critical for safety. Replace only with the part number specified.

**Note :** Les composants identifiés par une trame et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

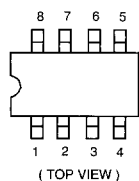
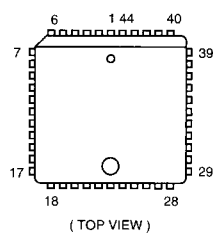
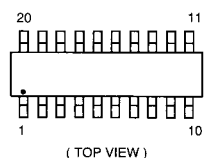
### Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
COIL	: 	ADJUSTABLE RESISTOR
	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

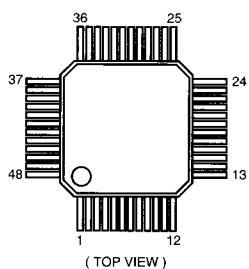
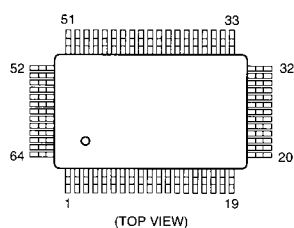
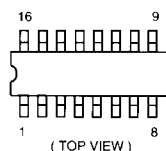
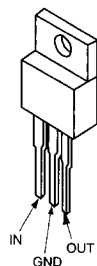
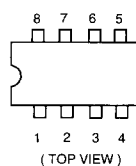
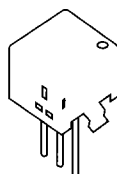
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
-  : B+ bus.
-  : signal path. (RF)

## 5-4. SEMICONDUCTORS

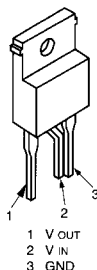
BA7046F

CF70200FN-R/C  
CF70203FN-FCF72416DW-R  
TDA8395T

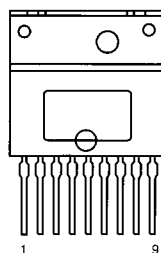
CXA1855Q

CXP85340A  
SAA7283GP  
TDA8366THD14053BF  
MC14053BFLM2940CT-5.0  
LM2940CT-9.0  
MCT7812CT  
TA7812S  
 $\mu$ PC2405HFLM393P  
TDA2822M  
 $\mu$ PC393CSBX1790-11  
SBX1790-51

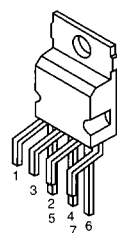
SE135N-LF12



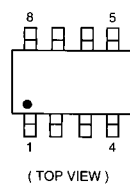
STR-S6708



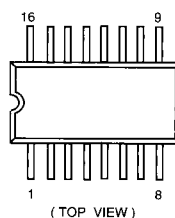
STV9379



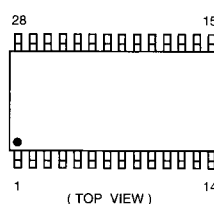
ST24E32M6



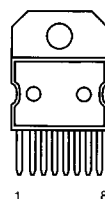
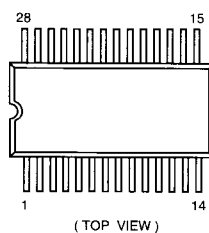
TDA4665T



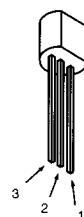
TDA6612-5X-GEG



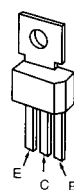
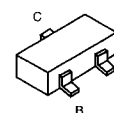
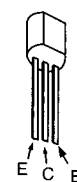
TDA7264

TDA9813T  
TDA9814T/V2

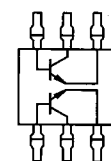
TL750L05CLPR



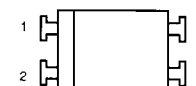
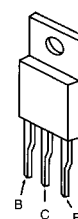
BF871

DTA144ES  
DTC114ES  
DTC143TS  
DTC144ESDTC114EK  
DTC123EK  
DTC144EK  
2SA1037K  
2SA1162-G  
2SC2412KJA101  
JC501  
2SA1091-O  
2SA733-K  
2SC2389S-R  
2SC2808S-R

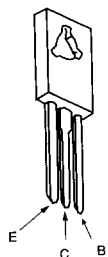
IMX1



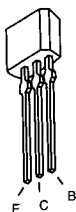
TLP721-GR

2SA1667  
2SC3852A

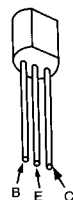
2SC2688-LK



2SC2785-HFE



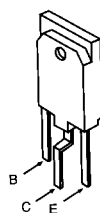
2SC3779C



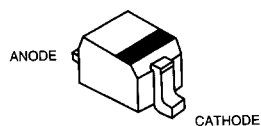
2SC4793



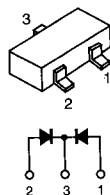
2SC4927-01



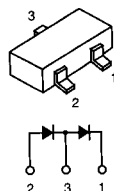
BAS216  
DTZ33B  
MA8330  
1SS355  
1SV214



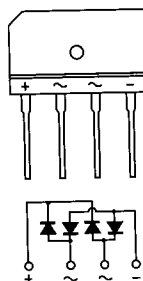
DAN202K  
UMZ12N



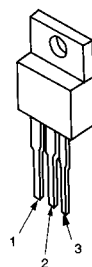
DA204K



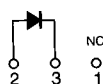
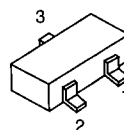
D4SB60L



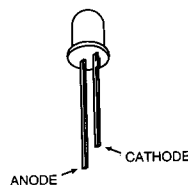
FMS-3FU



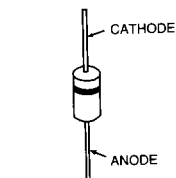
MA704WK



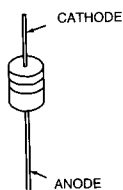
SLA-570KT3F



AU-01Z-V1 GP08D  
EGP20G RGP02-20E  
EL1Z RGP10GPKG23  
EM1-V1 RGP15GPKG23  
EU-1-V1 RU-3YX-V1  
EU-1Z RU4AM  
EU-1Z-V1 RU4DS  
FML-G12S



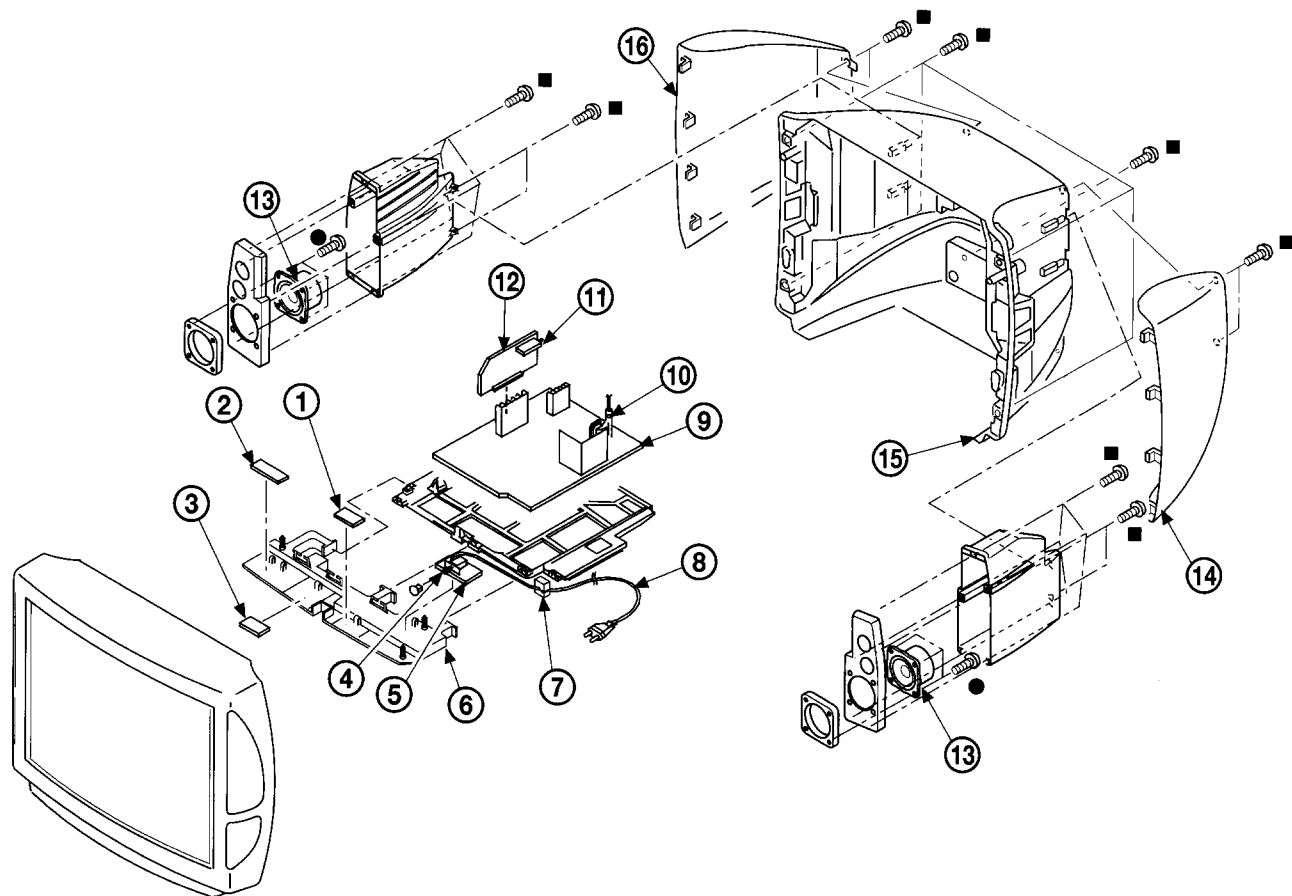
ERA85-009 MTZJ-9.1C  
MTZJ-3.6A MTZJ-39C  
MTZJ-3.9B RD3.9ESB2  
MTZJ-4.7B RD5.1ESB2  
MTZJ-5.1B RD5.6ESB2  
MTZJ-5.6B RD6.8ESB2  
MTZJ-6.8C RD7.5ESB2  
MTZJ-7.5C RD9.1ESB3  
MTZJ-9.1 UZ-4.7BSC  
MTZJ-9.1A 1SS133



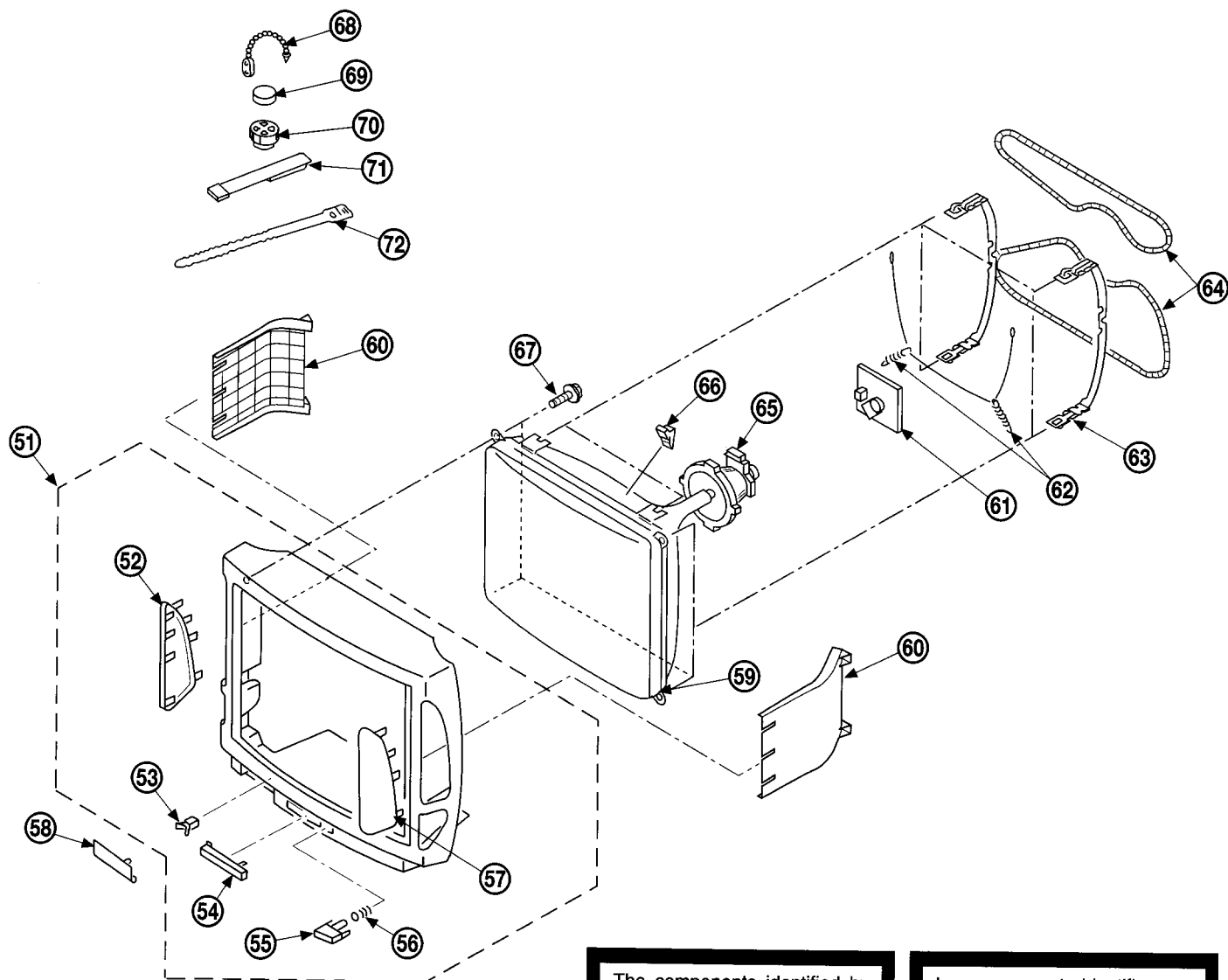
## 6-1. CHASSIS

■ : BVTP 4X16 7-685-663-79

● : BVTP 3X12 7-685-648-79



## 6-2. PICTURE TUBE



The components identified by shading and marked  $\triangle$  are critical for safety. Replace only with the part number specified.

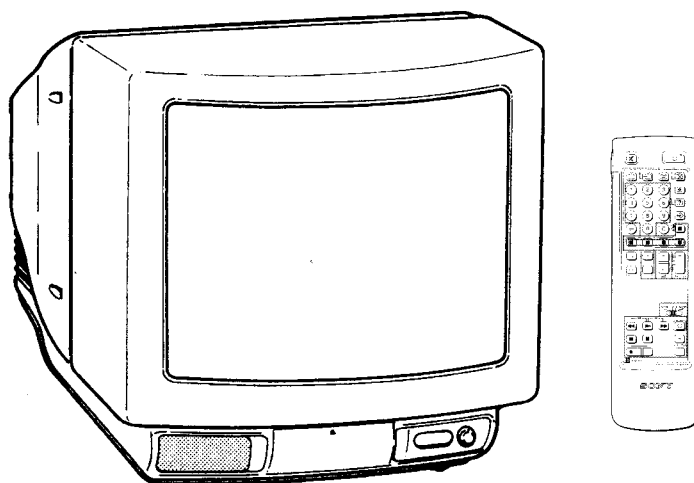
Les composants identifiés par une trame et une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



# SERVICE MANUAL

# BE-3B CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-M2540D	RM-833	AEP	SCC-G77G-A	KV-M2541E	RM-833	Spanish	SCC-G82E-A
KV-M2541D	RM-833	AEP	SCC-G77F-A	KV-M2541L	RM-833	IRISH	SCC-G83D-A
KV-M2541A	RM-833	Italian	SCC-G81F-A	KV-M2541U	RM-833	UK	SCC-G87D-A
KV-M2540B	RM-833	French	SCC-G85F-A	KV-M2540K	RM-833	OIRT	SCC-G86E-A
KV-M2540E	RM-833	Spanish	SCC-G82F-A	KV-M2541K	RM-833	OIRT	SCC-G86D-A



TRINITRON® COLOR TV  
**SONY®**

ITEM	MODEL	Television System	Channel Coverage	Color System
AEP		B/G/H, D/K	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Italian		B/G/H	ITALIA VHF:A-H2 (C) UHF: 21-69 PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10	PAL NTSC4.43, NTSC3.58 (VIDEO IN)
French		B/G/H, L, I	L VHF:F02-F10 UHF:F21-F60 CABLE:B-Q B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 I UHF: B21-B69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO-IN)
Spanish		B/G/H	PAL B/G VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69	PAL NTSC4.43, NTSC3.58 (VIDEO-IN)
Irish		I	VHF: A-J C10 (224MHZ) UHF: E21-E69 CABLE SO1-S41	PAL NTSC4.43, NTSC3.58 (VIDEO IN)
UK		I	UHF: B21-B69	PAL NTSC4.43, NTSC3.58 (VIDEO IN)
OIRT		B/G/H	B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)

MODEL	AEP Text	AEP Non Text	Italian	French Non Text	Spanish Text	Spanish Non Text	Irish	UK	OIRT TEXT	OIRT NON TEXT
Power Consumption	85W	85W	85W	85W	85W	85W	109W	109W	85W	85W

## SPECIFICATIONS

Picture Tube Hi-Black Trinitron  
Approx. 63 cm (25 inches)  
(Approx. 60 cm picture measured diagonally)  
110° -deflection

### Input/Output Terminals

#### [REAR]

- ⊖ 1 21-pin Euro connector (CENELEC standard)
- inputs for audio and video signals
- inputs for RGB
- outputs of TV video and audio signals

#### [FRONT]

- ⊖ 2 Video input - phono jack
- ⊕ 2 Audio inputs - phono jacks
- ⊖ 2S video input 4-pin DIN
- Ω Headphone jacks : stereo minijack

- Sound output 10W (Music)
- Power requirements 220 - 240V
- Dimensions Approx. 500x580x520 mm
- Weight Approx. 43kg
- Supplied accessories RM-833 Remote Commander (1)  
IEC designation R6 battery (1)
- Other features FASTEXT, TOPTXT.


#### [RM-833]

- Remote control system infrared control
- Power requirements 1.5V dc  
1 battery IEC designation R6 (size AA)
- Dimensions Approx. 65x225x21 mm (w/h/d)
- Weight Approx. 157g (Not including batteries)

Design and specifications are subject to change without notice.

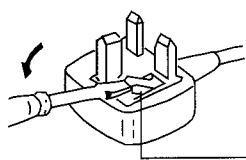
Model name Item	KV-M2541A	KV-M2540B	KV-M2540D	KV-M2541D	KV-M2540E	KV-M2541E	KV-M2540K	KV-M2541K	KV-M2541L	KV-M2541U
RGB Priority	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Front in (3)	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON	ON	ON	ON	ON
Norm B/G	ON	ON	ON	ON	ON	ON	ON	ON	OFF	OFF
Norm I	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	ON	ON
Norm D/K	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF
Norm AUS	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Teletext	ON	OFF	OFF	ON	OFF	ON	OFF	ON	ON	ON
Language Preset	Italian	French	Deutsch	Deutsch	Spanish	Spanish	OIRT	OIRT	English	English

### WARNING ( KV-M2541L / KV-M2541U only )

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the  mark.

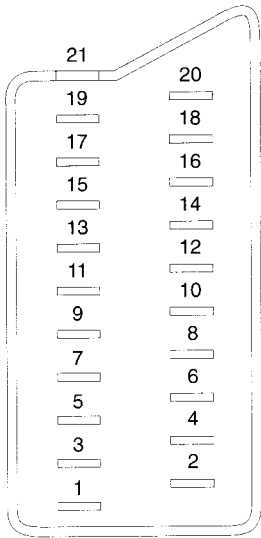
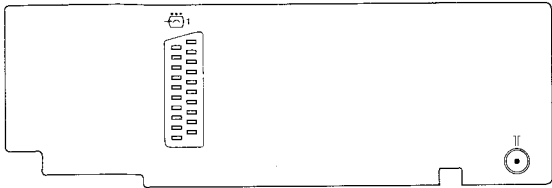
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME. IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.

When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.  
Open the fuse compartment with the screwdriver blade and replace the fuse.

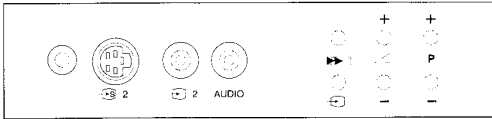
21 pin connector ( ②-1 )



Pin No.	1	2	4	Signal	Signal level
1	○	○	○	Audio output B (right)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
2	○	○	○	Audio input B (right)	Standard level : 0.5V rms Output impedance : More than 10kohm*
3	○	○	○	Audio output A (left)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
4	○	○	○	Ground (audio)	
5	○	○	○	Ground (blue)	
6	○	○	○	Audio input A (left)	Standard level : 0.5V rms Output impedance : More than 10kohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More than 10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (green)	
10	○	○	○	Open	
11	○	●	●	Green	Green signal : 0.7 ± 3dB, 75 ohms, positive
12	○	○	○	Open	
13	○	○	○	Ground (red)	
14	○	○	○	Ground(blanking)	
15	○	—	—	Red input (S signal) croma input	0.7 ± 3dB, 75 ohms, positive 0.3 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75ohms
17	○	○	○	Ground(video output)	
18	○	○	○	Ground(video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync: 0.3V(-3+10dB)
20	○	—	—	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync: 0.3V(-3+10dB)
21	○	○	○	Common ground (plug, shield)	

○ Connected    ● Not Connected (open)    \* at 20Hz - 20kHz

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm , positive Sync. 0.3V -3/+10 dB
4	C (S signal) input	0.3V ± 3dB 75 ohm , positive Sync.



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### CAUTION

**SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.**

### WARNING !!

AN ISOLATING TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD, DUE TO A LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

### SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARKED ! ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLIMENTS PUBLISHED BY SONY.

### ATTENTION

**APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.**

### ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENTION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

### ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ !!

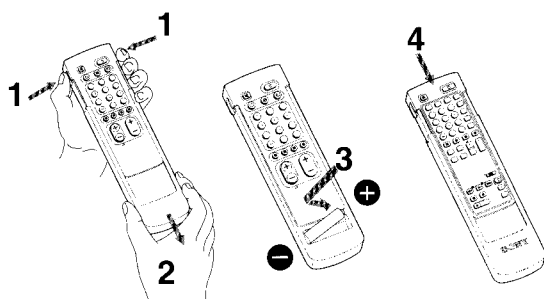
LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE ! SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

## SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

### Getting Started

#### Inserting the Battery Into the Remote Commander



Remove the cover.

Check the correct polarity.

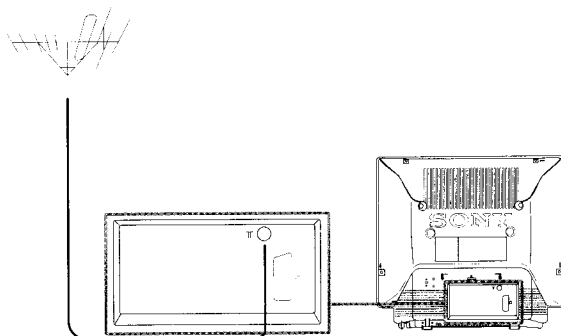
Refit the outside cover making sure that the Full Function side is visible.

#### About Battery Life

Under normal operation, a battery will last up to half a year.

#### Connecting the Aerial

Connect aerial to the socket at the rear of the TV. (cable not supplied)



#### Choosing a Language

(See inside of front cover and back cover)

**1** Depress **A** on the TV.  
The TV turns on. If the standby indicator **B** on the TV is lit, press **3** or any number button **4** on the Remote Commander.

**2** Press **MENU** on the Remote Commander.  
The SELECT LANGUAGE screen appears.

**MENU**

**3** Press one of the colour buttons on the Remote Commander to select a language (Press the white button to display other language alternatives). The SELECT LANGUAGE screen clears and all subsequent menus appear in the chosen language.

**SELECT LANGUAGE**

- ENGLISH
- DEUTSCH
- FRANÇAIS
- ESPAÑOL
- MORE

SELECT COL. BUTTON

**Note:** From the second time when you turn on the TV, the MENU screen appears instead of the SELECT LANGUAGE screen. Press the yellow button then press the white button to redisplay the SELECT LANGUAGE screen.

#### Tuning in to Channels

You can tune in up to 60 channels to programme positions either automatically or manually.

**auto tuning:** A single button press allows all receivable channels to be tuned. Use if you are unfamiliar with the channel numbers of stations.

**manual tuning:** Use if you are familiar with the channel numbers of stations. (Channel numbers from the main UK transmitters are shown on page 13)

Choose the more appropriate way for you.

#### Tuning in to Channels Automatically

There are two possibilities for auto tuning;

**A.** On the TV: hold down **E** on the front of the TV for 2 seconds  
(All receivable channels are tuned in the order noted below).

or

**B.** On the Remote Commander: as follows

**1** Press **MENU** .

**2** Press the yellow button .

**3** Hold down the red button for 2 seconds,

**Note:** Press the green button to cancel.

Channels are automatically stored as follows:

	KV-M2541U	KV-M2541L
Programme1	BBC1	RTE1
Programme2	BBC2	RTE2
Programme3	ITV	BBC1
Programme4	CH4 or S4C	BBC2
Programme5	—	ITV
Programme6	—	CH4 or S4C

**Note:** Programme names are automatically taken from TELETEXT if available. If not, "----" is placed in the name.

- If you connect a VCR via the aerial cable, set the VCR to its test signal or play mode before auto-tuning.
- You may have to exchange the programme positions, if there are duplicated signals from local transmitters.

## Tuning in to Channels Manually

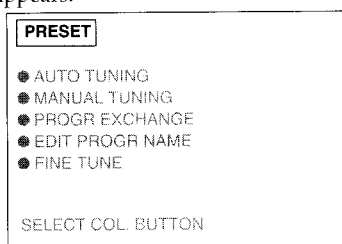
### 1 Press MENU [7].

The MENU screen appears.



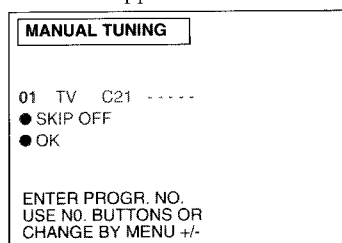
### 2 Press the yellow button [17] to select PRESET.

The PRESET screen appears.



### 3 Press the green button [17] to select MANUAL TUNING.

The MANUAL TUNING screen appears.

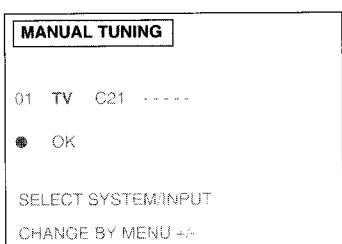


### 4 Press the number buttons [4] or MENU+/- [9] to select a programme position.

If you use the number buttons [4], enter a double-digit number. (e.g. for programme number 4, first press 0, then 4)

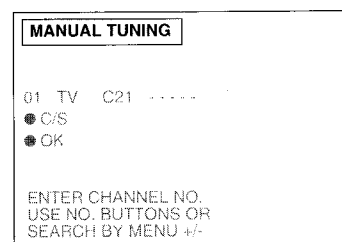
### 5 Press the green button [17].

**Note:** Use MENU +/- [9] to select "TV". You can alternatively select input sources which may be assigned to programme positions. The display changes as follows:



### 6 Press the green button [17].

**Note:** If a video input source is selected in step 5, this is now stored. Refer to step 4 to tune other programme positions.



### 7 (KV-M2541L only) Press the red button [17] to select C (regular channel) or S (cable channel).

### 8 Press the number buttons [4] or MENU+/- [9] to select the channel number.

If you use the number buttons [4], enter a double-digit number. (e.g. for channel 23, first press 2, then 3)

**Note:** Programme names are automatically taken from TELETEXT if available. If not, "----" is placed in the name. Or if you select AV1, RGB, AV2 or YC2 as an input source, AV1, RGB, ... is placed.

### 9 Press the green button [17] to store.

**Note:** If you want to preset other channels, repeat steps 4 to 9.

### 10 Press MENU [7] twice to return to the normal screen.

**Note:** You can skip unused programme positions when selecting programmes with the PROGR +/- buttons [18]. Press the red button [17] to skip in step 4. However, the skipped programmes may still be called up when you use the number buttons.

## Basic TV Operations

### Turning the TV on and off

#### Turning on

Depress [A] on the TV.

#### Turning off temporarily

Press [10] on the Remote Commander.

The TV enters standby mode and the standby indicator [B] on the front of the TV lights up.

#### Turning on again

Press [3], PROGR +/- [18], or one of the number buttons [4] on the Remote Commander.

#### Turning off completely

Depress [A] on the TV.

**Note:** It is recommended to use [A] to turn off the TV. This could help you save energy.

### Selecting TV Programmes

Press PROGR +/- [18] or press number buttons [4].

#### To select a double-digit number

Press -/-- [5], then the number buttons [4].

### Adjusting the Volume

Press [19].

### Muting the Sound

Press [1].

To resume normal sound, press [1] again.

### Displaying the On-screen Indications

Press [14] once to display the on-screen indications. Press again to make the indications disappear.

### Operating the TV Using the Buttons on the TV

With the buttons on the TV, you can adjust or select the functions as follows:

Press [D] to adjust the volume.

Press P+/- [C] to select programme numbers or to turn the TV on from the standby mode.











Press [F] to select the input source.

Press [E] to preset channels automatically.

# Advanced TV Operations

## Operating the Menu System







You can adjust picture, preset channels to programme positions and utilise other convenient features by using the following menu system.

Press;	to;
<b>1</b> MENU  	enter the MENU screen
<b>2</b> a colour button  	select an item you want to change (The selected item is marked by a triangle.)
<b>3</b> MENU+/-   	change (or adjust) the contents of the item
<b>4</b> MENU 	return to the MENU screen
<b>5</b> MENU  again	return to the normal screen
Press MENU  once or twice whenever you want to return to the normal screen.	

**Note:** When selecting menus, the picture becomes darker. If, however, an item in the PICTURE ADJUSTMENT menu is selected, normal level of TV picture is restored to allow the best adjustment.

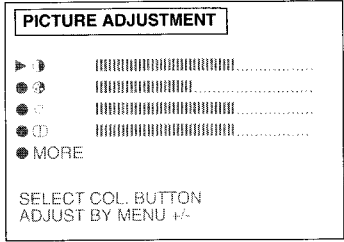
## Adjusting the Picture





Although picture is adjusted at the factory you can adjust it to suit your own taste.

- 1** Press MENU . The MENU screen appears. 
- 2** Press the red button  to select PICTURE.
- 3** Press the respective colour button  to select an item.
- 4** Press MENU +/-  to adjust.
- 5** Press MENU  twice or wait until the menu displays disappear automatically to return to the normal screen.

## PICTURE ADJUSTMENT

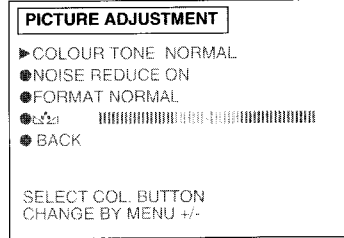
(First Page)





Press colour button	Effect
<b>Red:</b> For Picture 	Less — — More
<b>Green:</b> For Colour 	Less — — More
<b>Yellow:</b> For Brightness 	Darker — — Brighter
<b>Blue:</b> For Sharpness 	Softer — — Sharper
<b>White:</b>	Next page of PICTURE ADJUSTMENT

## PICTURE ADJUSTMENT

(Second Page)








Press colour button	Effect
<b>Red:</b> For Colour Tone	Normal -> Warm (reddish colour tone) -> Cool (blueish colour tone)
<b>Green:</b> For Noise Reduce	ON: Reduces picture noise (in case of low signal level) OFF: Normal setting
<b>Yellow:</b> For Format	Normal: Normal setting 16:9 Wide screen effect
<b>Blue:</b> For Hue control  (only for NTSC video signals)	Reddish — — Greenish
<b>White:</b>	Back to first page of PICTURE ADJUSTMENT

**Note:** Press  on the Remote Commander to reset to the factory preset levels for picture.

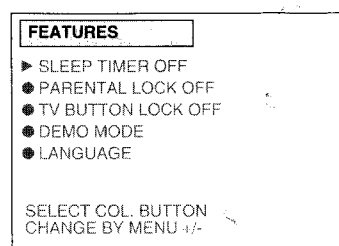


## Using Special Features

With your TV you can utilise special features such as Parental Lock or Sleep Timer .

- 1** Press **MENU** .  
The MENU screen appears.
- 2** Press the green button  to select **FEATURES**.
- 3** Press the respective colour button  to select an item.
- 4** Press **MENU +/-**  to change.
- 5** Press **MENU**  twice or wait until the menu displays disappear automatically to return to the normal screen.

## FEATURES



Press colour button	Effect
<b>Red:</b> For Sleep Timer  (Automatic switch off function)	OFF -> 0:30 -> 1:00 -> 1:30 -> 2:00 (hours) After the selected time the TV set switches itself automatically into standby mode.
<b>Green:</b> For Parental Lock (For preventing children from watching programmes which you consider unsuitable)	OFF: Normal setting ON: The TV-channel you are watching is now blocked. In this way you can prevent undesirable broadcasts from appearing on the screen.
<b>Yellow</b> For TV Button Lock	OFF: Normal setting ON: The buttons on the TV do not function anymore. (The Remote Commander still operates)
<b>Blue:</b> For Demo Mode	ON: A sequence of menu pictures is displayed. Press any button on the Remote Commander to stop the function.
<b>White:</b> For Language	The SELECT LANGUAGE screen appears.

## Advanced Presetting Functions

### Exchanging Programme Positions

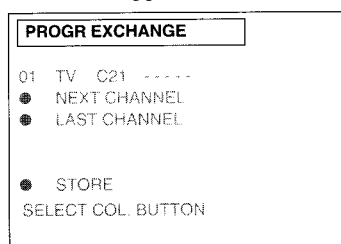
You can exchange the programme positions to a preferred order (example: exchange programme 09 (channel C21) with programme 15 (channel C24)).

- 1 Press **MENU** **[7]**.  
The MENU screen appears.



- 2 Press the yellow button **[17]**.  
The PRESET screen appears.

- 3 Press the yellow button **[17]**.  
The PROGR EXCHANGE screen appears.



- 4 Press the white button **[17]** repeatedly until the desired programme number (09) appears.
- 5 Press the red or the green button **[17]** repeatedly until the desired channel number (C24) appears.
- 6 Press the white button **[17]** to store.  
Now the exchange has been completed. Channel C24 is tuned in to programme 09 and channel C21 is tuned in to programme 15.
- 7 Press **MENU** **[7]** twice to return to the normal screen.

### Editing Programme Names

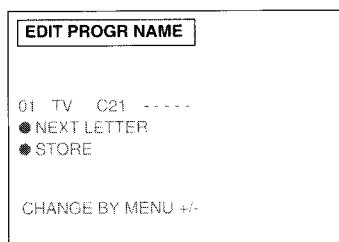
You can edit the programme names up to five letters.

- 1 Press **MENU** **[7]**.  
The MENU screen appears.



- 2 Press the yellow button **[17]**.  
The PRESET screen appears.

- 3 Press the blue button **[17]**.  
The EDIT PROGR NAME screen appears.  
The first character flashes.



- 4 Press **MENU** **[7]** **[9]** to edit the first letter.  
The first letter changes as follows;

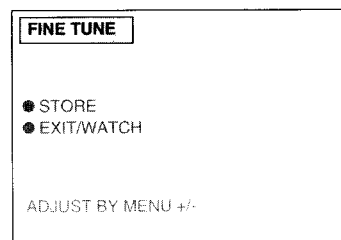
A ↔ B ↔ ... ↔ Z ↔ 0 ↔ 1 ↔ ... ↔ 9 ↔ " " (space)

- 5 Press the red button **[17]** to move to the next letter.
- 6 Repeat steps 4 to 5, until the fifth letter is chosen.
- 7 Press the green button **[17]**.  
The programme name is stored, and the normal screen appears. To edit another programme name, repeat steps 1 to 7.

### Fine Tuning

You can adjust the receiving condition by the FINE TUNE function.

- 1 Press **MENU** **[7]**.  
The MENU screen appears.
- 2 Press the yellow button **[17]**.  
The PRESET screen appears.
- 3 Press the white button **[17]** again.  
The FINE TUNE screen appears.



- 4 Press **MENU** **[7]** **[9]** to adjust the receiving condition.
- 5 Press the red button **[17]** to store the adjustment, or press the green button **[17]** not to store.  
Then the normal screen appears. If you have pressed the green button, the fine tuned condition is cancelled once you choose another programme.

### Tuning in to a Channel Temporarily

You can tune in to a channel temporarily, even when it has not been preset.

- 1 Press **C** **[16]** on the Remote Commander.  
The indication "C" appears on the screen.  
**Note:** (KV-M2541L only)  
For cable channels, press **C** **[16]** twice. The indication "S" appears.
- 2 Enter a double-digit channel number using the number buttons (e.g. for channel 23, first press 2, then 3).  
The channel appears.  
However, the channel is not stored.

## Teletext Operation

TV stations broadcast teletext programmes via the TV channels. For basic operation of teletext, use the simple side of the Remote Commander. For the advanced features of teletext, use the buttons indicated in green on the full function side of the Remote Commander.

### Basic Teletext Operation

#### Switching Teletext on and off

- 1 Select the channel which carries the teletext service you wish to view.

- 2 Press **[11]** to display Teletext.

If no teletext signal is broadcast, the indication P100 is displayed on a black screen.



- 3 Input three digits for the page number using the number buttons **[4]**.

The numbers are displayed on the screen and the requested page appears in a few seconds.

**Note:** If you make a mistake, type in any three digits, then re-enter the correct page number.

- 4 Press **[3]** to return to the TV mode.

**Note:** To change the teletext channels. First press **[3]** to return to the TV mode, then repeat steps 1 to 3.

**Note:** If the signal of a TV channel is weak, teletext errors may occur.

### Advanced Teletext Operation

#### Using Fastext

With Fastext you can access pages with one button press. When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons **[6]** on the Remote Commander.

Press the corresponding colour button **[6]** on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed in a few seconds.

#### Requesting the Index page

Press **[17]**. The Index page appears.

#### Accessing the next or preceding page

Press **[18]** (PAGE +) or **[19]** (PAGE -) **[18]**. The next or the preceding page appears on the screen.

#### Superimposing the teletext display on the TV picture

Press **[11]** once if you are in text mode or press **[11]** twice if in TV mode.

To return to the normal teletext display press **[11]** again.



#### Preventing a teletext page from being updated or changed

Press **[2]** (HOLD) **[2]**. The HOLD symbol (**[2]**) appears on the screen and the selected subpage is held until you press **[11]** to cancel.

### Enlarging the teletext display

Press **[13]** once to enlarge the upper half. Press twice to enlarge the lower half. Press again to restore the normal display.



### Revealing concealed information (e.g. answers to a quiz)

Press **[14]** (REVEAL) **[14]**. The information is revealed. Press **[14]** again to conceal the information.

### Watching TV while waiting for a requested page to be displayed

- 1 Request a new teletext page.

- 2 Press **[12]** (TEXT CL).

The TV programme is displayed and the symbol **[12]** is displayed at the top of the page.

**Note:** When the requested page is available the page number is displayed at the top of the screen.

- 3 Press **[11]** to view the page.

**Note:** To cancel the request

Display the teletext page, then press **[11]**. The request is now cancelled. Press **[3]** to resume TV mode.

### Using the Favourite Page system

You can store up to four of your favourite teletext pages per programme with the help of the Favourite page system. In this way you have quick access to the pages you watch frequently.

#### Storing the Favourite Pages

- 1 Select the page you would like to store using the number buttons **[4]**.

- 2 Press **[15]** twice.

The colour prompts at the bottom of the screen flash.

- 3 Press any of the colour buttons **[6]** on the Remote Commander to store the selected page.

The page is now stored on this button.

Repeat steps 1 to 3 for the other 3 pages available.

#### Displaying the Favourite pages

- 1 Press **[15]**.

- 2 Press the colour button **[6]** corresponding to the colour prompt onto which the desired page is stored.

The page is requested. (It may take a few seconds to be received).

**Note:** Step 1 must be taken before every favourite page selection, otherwise the normal Fastext facility operates.









### Using the Time Function in the TV mode



Press **[12]** to request the time. Press again to cancel the request.





**Note:** This function is available only when teletext is broadcast.



## Connecting Other Equipment

You can connect optional audio/video equipment to this TV such as VCRs, video disc players, cameras or stereo systems.


Connector	Acceptable input signal	Available output signal
 1  (AV1/RGB)	Audio/video and RGB signal	Audio/video signal from TV Tuner
 2   (AV2)	Audio/video signal	No outputs
 2   (YC2)	Audio/S video signal	No outputs


To watch a video input picture, press   until the desired video input appears.

To return to the normal TV picture, press   repeatedly or press  .

**Note:** If you have a decoder, connect it to  1 .

### Connecting a VCR Using the TV Aerial Terminal

Connect the aerial output of the VCR to the aerial terminal  of the TV. It is recommended to tune in the VCR signal to programme number "0". For details, see "Tuning in to Channels Manually" on page 6.


**Note:** S video input (Y/C input) .

Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals. Separating the Y and C signals prevents them from interfering with each other and therefore improves the picture quality (especially luminance). This TV is equipped with 1 video input terminal through which these signals can be input directly.

## Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control most Sony remote-controlled video equipment such as: Beta, 8mm or VHS VCRs or video disc players.

### Tuning the Remote Commander to the equipment


**1** Set the VTR 1/2/3 MDP selector  according to the equipment you want to control:

VTR 1: Beta VCR

VTR 2: 8mm VCR


VTR 3: VHS VCR

MDP: Video Disc Player


**2** Use the buttons  to operate the additional equipment.

**Note:** If your video equipment is furnished with a COMMAND MODE selector: set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.

**Note:** If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.

**Note:** When you use the  (record) button, make sure to press this button and the one to the right of it simultaneously.

## Using Headphones








You can utilise headphones. Connect them to the headphone jack , then the sound from the speaker goes off.

## For your information





### Troubleshooting

Here are some simple solutions to problems which may affect the picture and sound.






#### No picture (screen is dark), no sound

- Plug the TV in.
- Press   on the TV. (If the standby indicator  is lit, press  or any number button  on the Remote Commander.)
- Check if the selected video source is on.
- Turn the TV off for three or four seconds and then turn it on again using  .




#### Poor or no picture (screen is dark), but good sound

- Press MENU  to enter the MENU screen, and press the red button , then adjust  and .

#### Good picture but no sound

- Press  + .
- If  is displayed on the screen, press  .

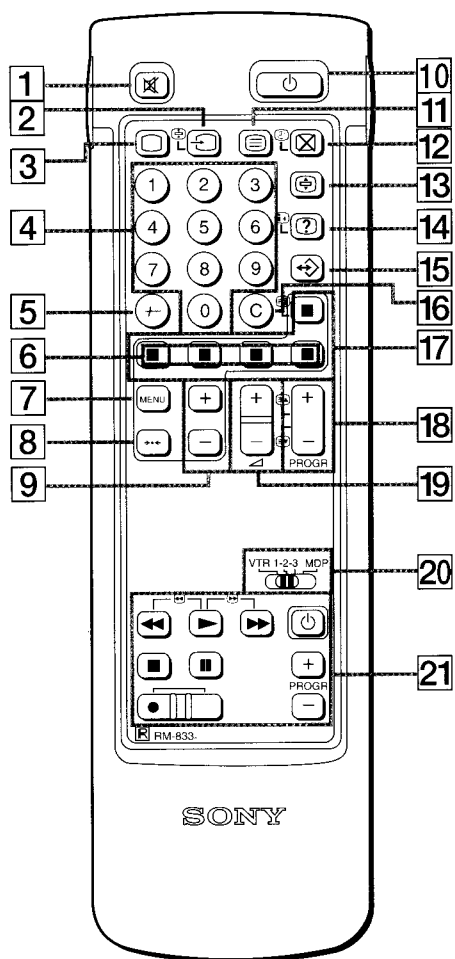
#### No colour for colour programmes

- Press MENU  to enter the MENU screen, and press the red button , then adjust .

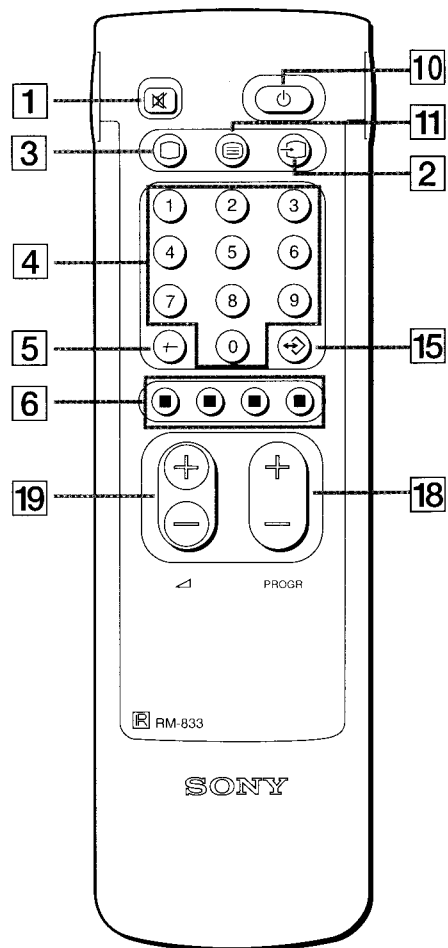
#### Remote Commander does not function

- Replace the battery.

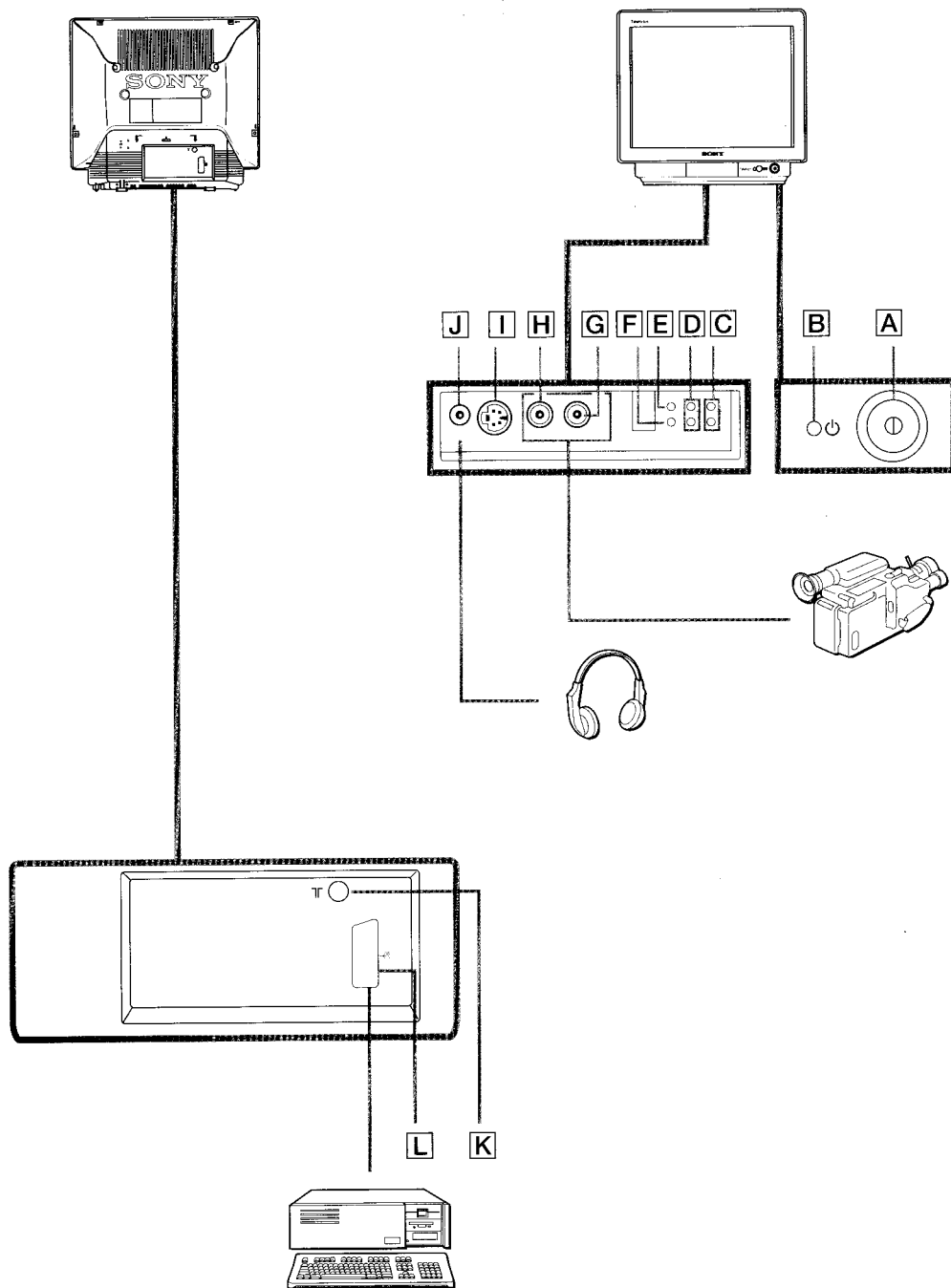
If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.



Full-Function Side

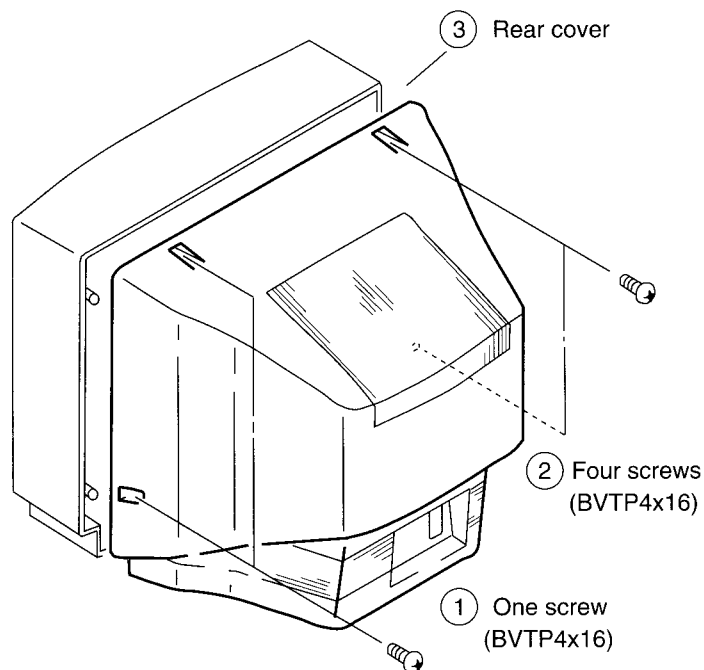


Simple Side

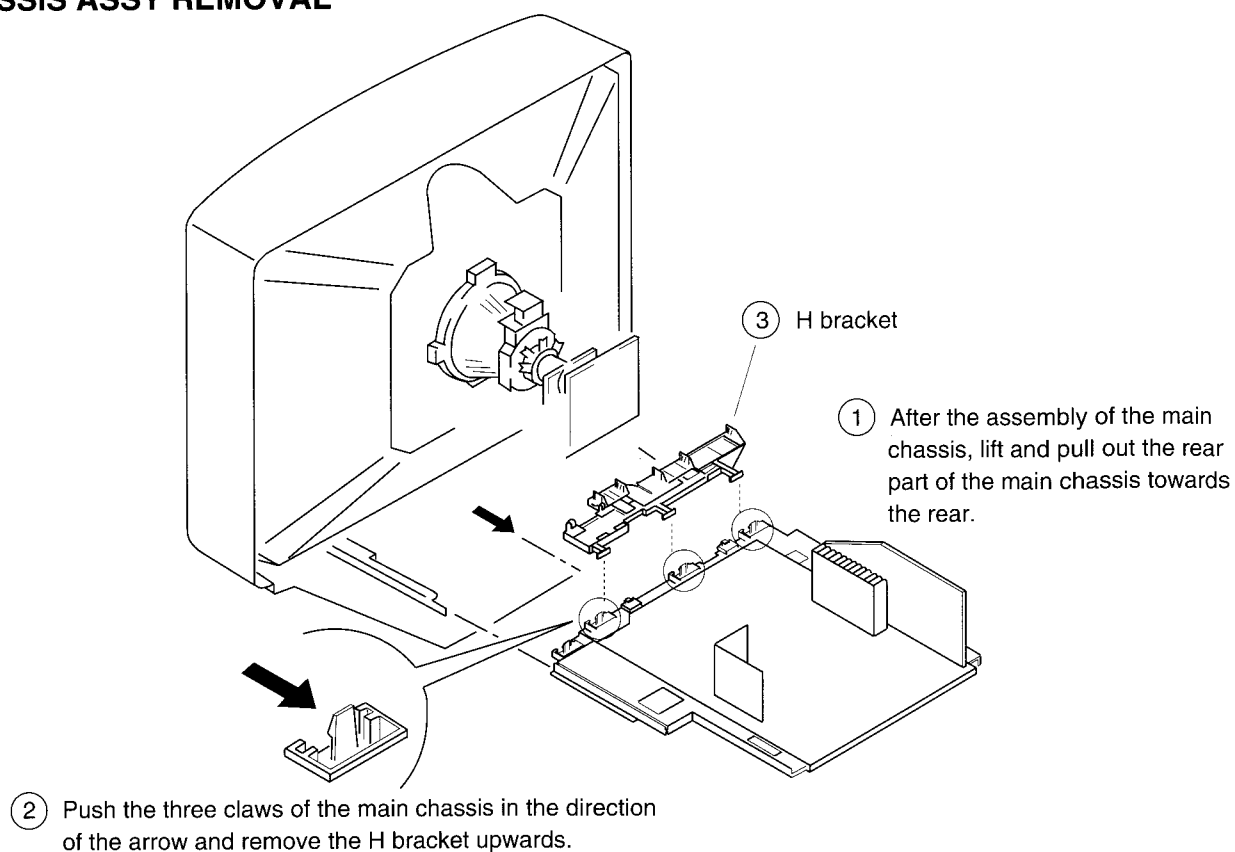


## SECTION 2 DISASSEMBLY

### 2-1. REAR COVER REMOVAL

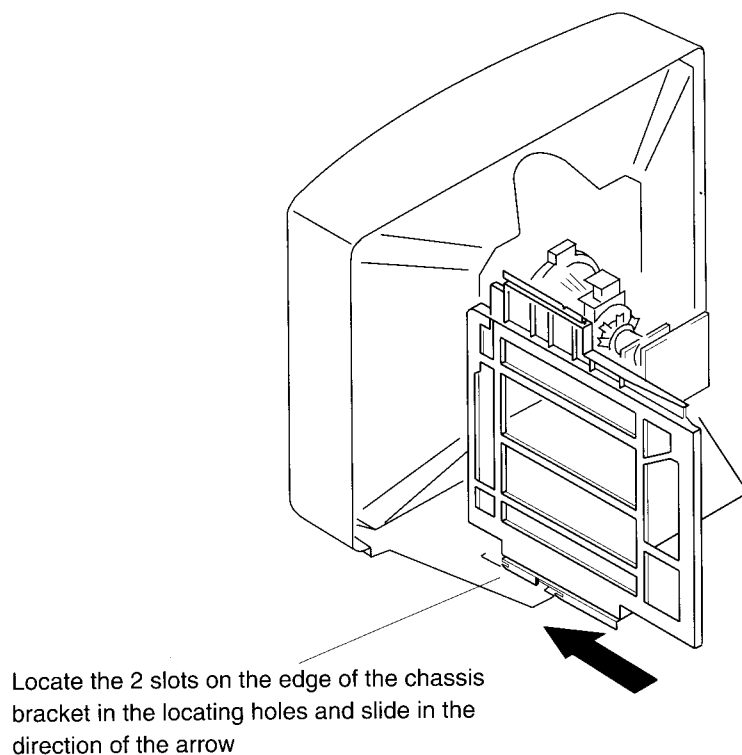


### 2-2. CHASSIS ASSY REMOVAL

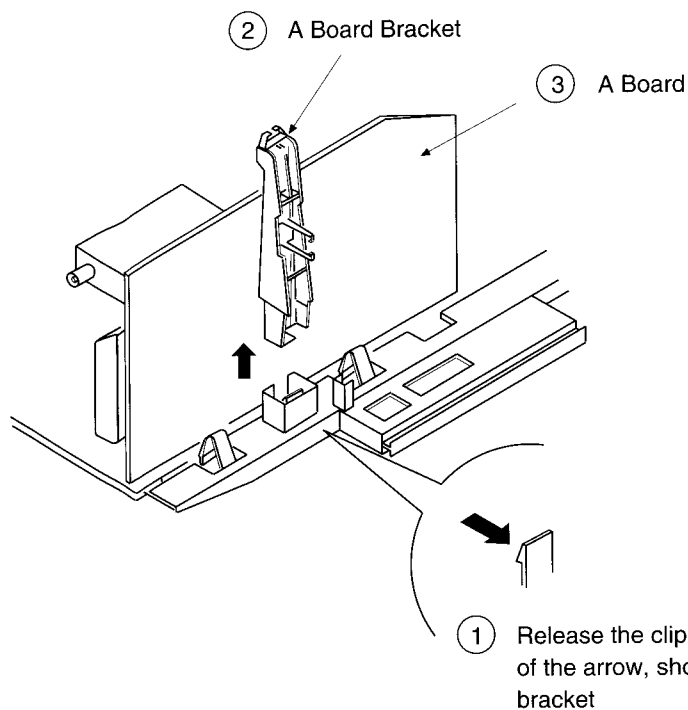




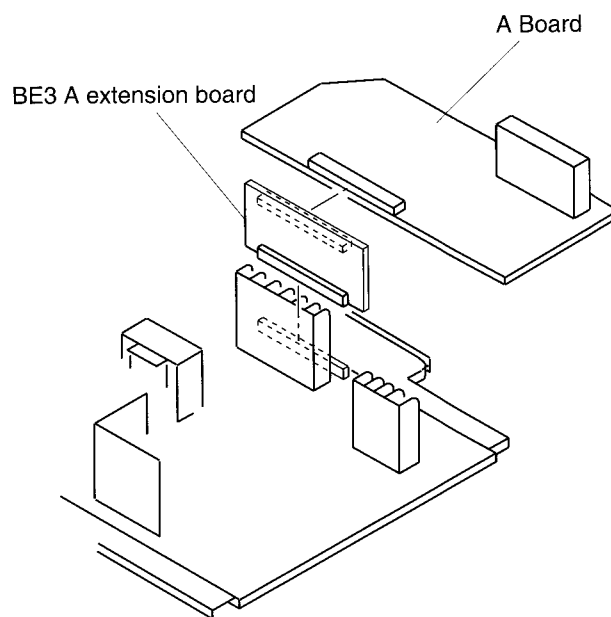
### 2-3. SERVICE POSITION



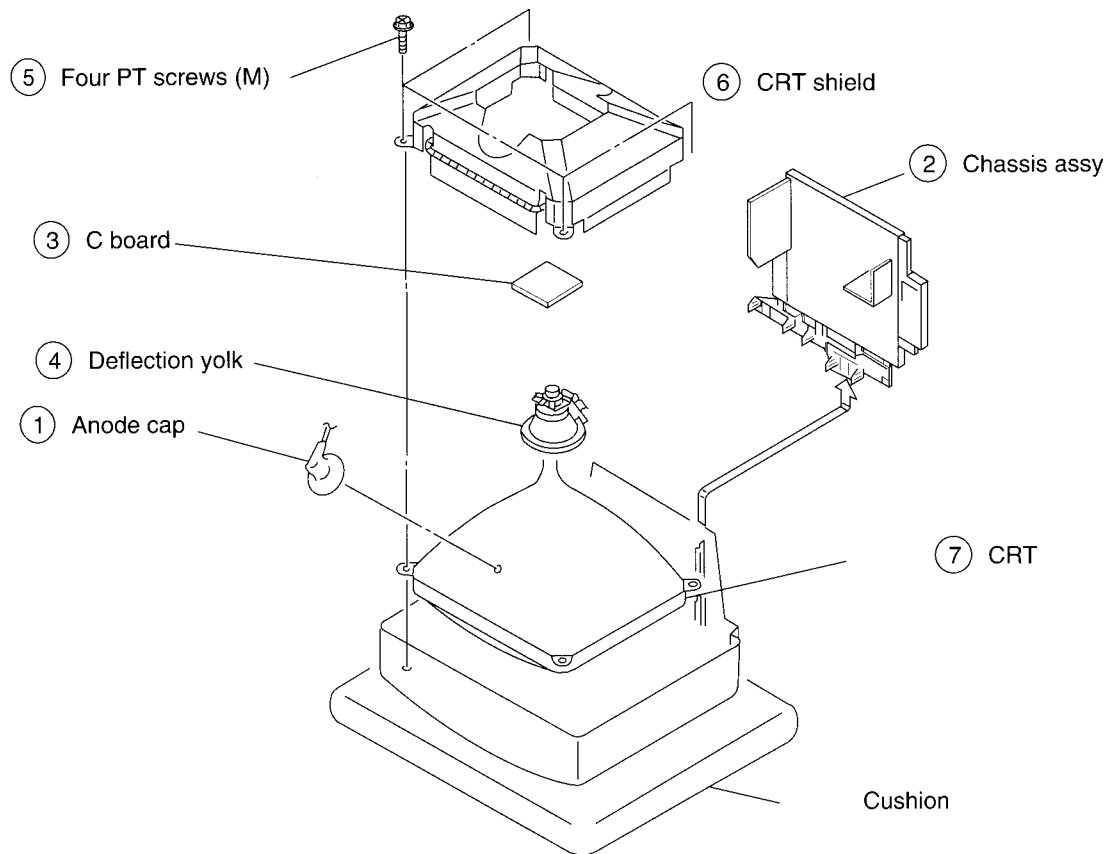
### 2-4. A BOARD REMOVAL



### 2-5. EXTENSION BOARD



## 2-6. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE-CAP

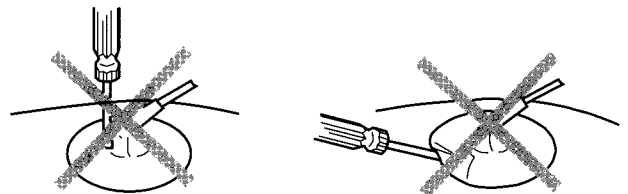
**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

#### \* REMOVING PROCEDURES.

- 
- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a)
  - ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b)
  - ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow (c)

#### • HOW TO HANDLE AN ANODE-CAP

- ① Don't damage the surface of anode-cap with sharp shaped material !
- ② Don't press the rubber hardly not to hurt inside of anode-caps !  
A metal fitting called as shatter-hook terminal is built into the rubber.
- ③ Don't turn the foot of rubber over hardly !  
The shatter-hook terminal will stick out or damage the rubber.



## SECTION 3

### SET - UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings :

Contrast ..... 80% (or remote control normal)  
 Brightness ..... 50%

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

**Note:** Testing equipment required.

1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

#### Preparation:

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

#### 3-1. BEAM LANDING

- Input the white signal with the pattern generator.  
 CONTRAST } normal  
 BRIGHTNESS }
- Position neck Assy as shown in Fig.3-2.
- Set the pattern generator raster signal to red.
- Move the deflection yoke forward and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 - 3-3)
- Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
- Switch the raster signal to blue, then to green and verify the condition.
- When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
- If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

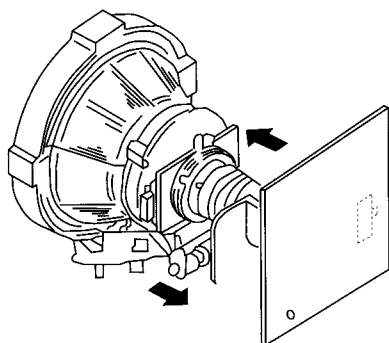


Fig. 3-1

Fig. 3-2

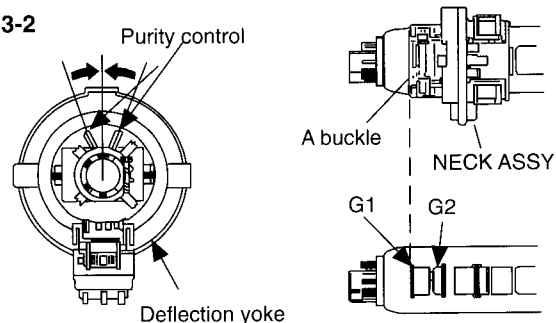


Fig. 3-3

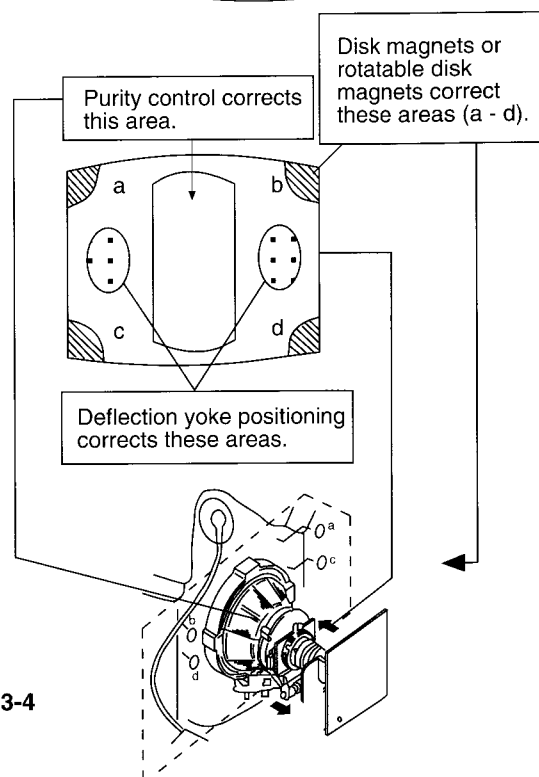
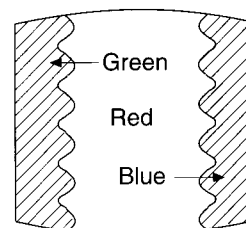


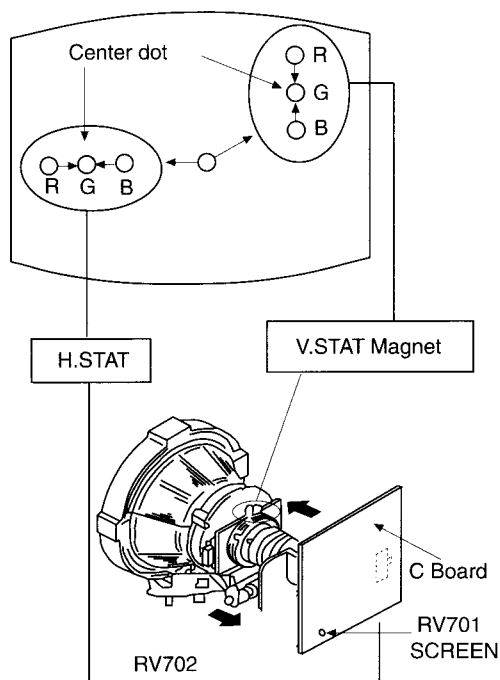
Fig. 3-4

### 3-2. CONVERGENCE

#### Preparation:

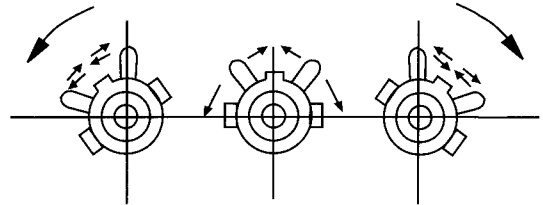
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

#### (1) Horizontal and vertical static convergence

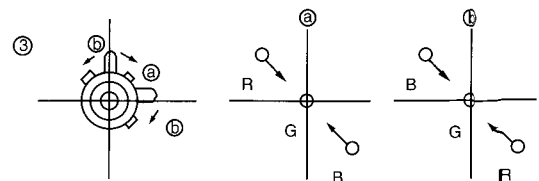
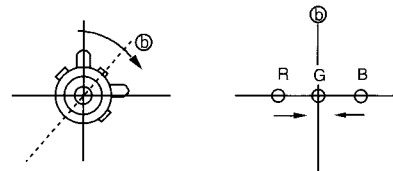
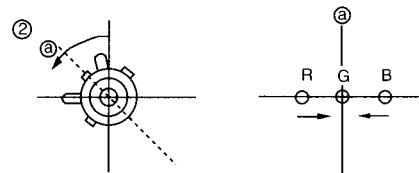
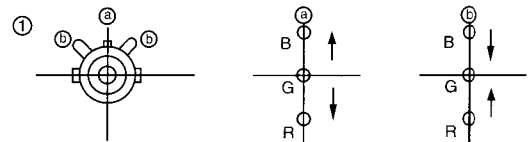


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.  
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

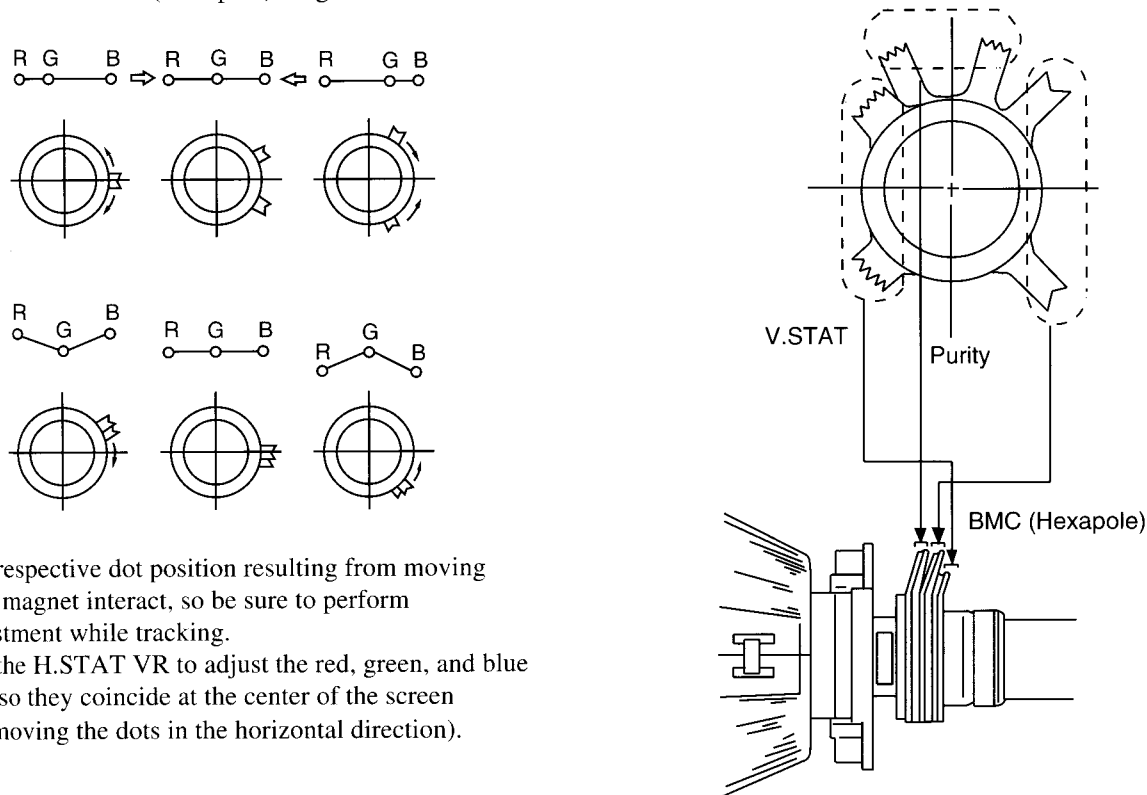
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



4. If the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet

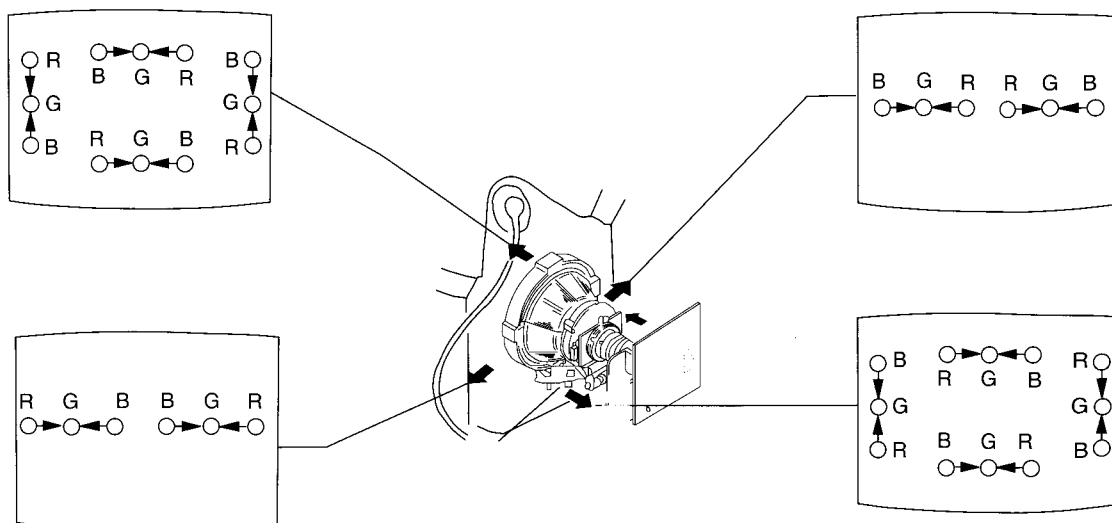


- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.  
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of the screen (by moving the dots in the horizontal direction).

## (2) Dynamic convergence adjustment.

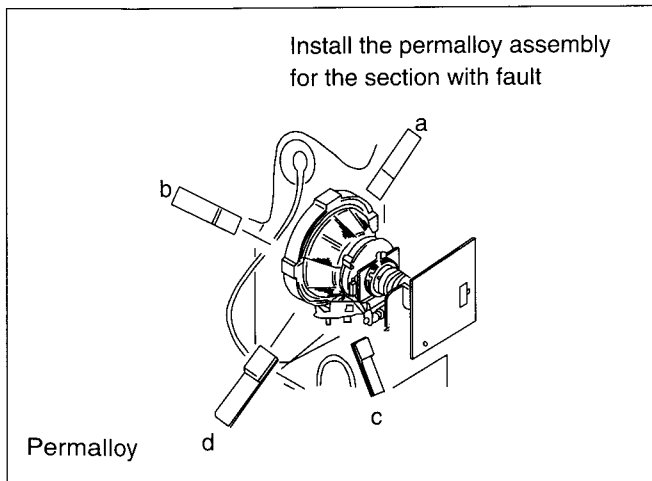
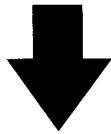
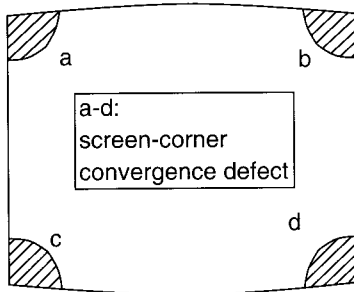
### Preparation:

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
- Slightly loosen the deflection yoke screws.
  - Remove the deflection yoke spacer.
  - Move the deflection yoke as shown in the figure below and optimize the convergence.
  - Tighten the deflection yoke screws.
  - Re-install the deflection yoke spacer.

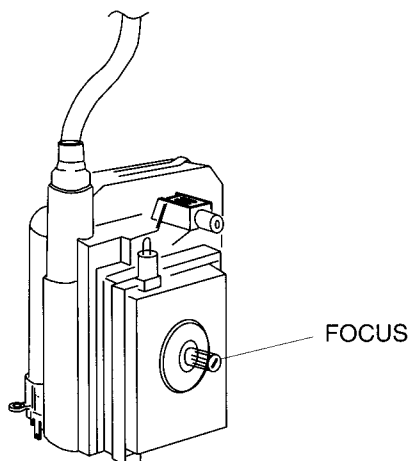


**(4) Screen corner convergence.**

If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.

**3-3. Focus**

Adjust the focus to optimize the screen.

**3-4. WHITE BALANCE****Screen G2 Setting**

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 180V DC to the R,G, and B cathodes with an external power supply.
4. While watching the picture, adjust G2 control RV701 (Screen) to the point just before the return lines disappear.

**White balance adjustment**

1. Receive an all-white signal.
2. Enter into service mode. (Refer to the section 4 "Electrical Adjustment" on how to enter service mode.)
3. Select TDA8366 1 on menu.

DEVICE : TDA8366 1

STAT : 12

☐ NEXT  
☐ PREVIOUS  
☐ OK

USE COLOUR KEYS  
 SONY TEST MENU.

4. Press the White button on the Remote Commander to enter into the device Menu.
5. Press the Red button 10 times "Next" "Next" "Next" to select HWB RED, adjust to 040.
6. Press the Red button to select HWB GREEN, adjust with the + and - menu buttons so that the white balance becomes optimum.
7. Press the Red button to select HWB BLUE, adjust with the + and - menu buttons so that the white balance becomes optimum.
8. Press the TV button twice on the Remote Commander to store the data and return to TV operation.

## SECTION 4

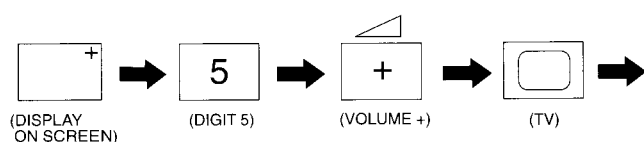
### CIRCUIT ADJUSTMENTS

#### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-833.

##### HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.



“TT” will appear in the top right corner of the screen.  
Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.

DEVICE NAME

STAT : xxxx

☐ NEXT

☐ PREVIOUS

☐ OK

USE COLOUR KEYS  
SONY TEST MENU.

4. Press the Red (Next) and Green (Previous) buttons to select the device corresponding to the adjustment item from the table. Then press the White button (OK).

DEVICE NAME

00 ADJUSTMENT : xxx

☐ NEXT

☐ PREVIOUS

SELECT COL.BUTTON  
CHANGE BY MENU +/-

5. Press the Red (Next) or Green (previous) buttons to select the adjustment item. Then press the and buttons to change the data to comply with each standard.
6. Turn off the power to quit the service mode when adjustments are completed.

Initial Conditions for setup of TDA8366, and TDA6622

TDA8366 1	INIT VALUE	TDA8366 2	INIT VALUE
Hue	31	Interlace	00
H Shift	Adj	Sync Mode	00
H Size	Adj	Col Dec	00
Pin Amp	Adj	Vert Div	00
Corn Pin	Adj	Vid ID	00
Tilt	Adj	EHT Track	01
V.Linear	Adj	En V Grd	00
V.Size	Adj	Serv Blk	00
S.Corr	Adj	OVP Mode	00
V.Cent	Adj	Aspect R	00
HWB Red	Adj	Start Freq	00
HWB Green	Adj	Y/C Input	00
HWB Blue	Adj	PAL/NTSC	00
Peaking	8	Xtal PLL	00
Bright	32	Y Delay	07
Colour	32	RGB Blk	00
Picture	37	Noise Cor	00
AGC Set	00	Fast Blk	01
Src Sel 1	00	AFC Wind	00
Src Sel 2	00	IF Sensy	00
Time Con	03	Mod Std	00
Xtal Ind	03	Vid Mute	01
FF Freq	02		

TDA6622	INIT VALUE	TDA6622	INIT VALUE
MPX Per	00	Mute 2	01
Quasi St	00	C1/2LS	00
Bass Exp	00	C1/2KH	00
H Pulse	00	Mono	01
Matrix St	00	Scart	00
Bypass	00	Scart D	00
Vol L Sp	31	AM	00
Vol R Sp	31		
Vol HP	00		
PLL Sync	00		
Mute 3	01		
Treble	07		
Bass	15		
X Talk Adj			
Mute 1	00		

## 4-2. TEST MODE 2 :

Is available by pressing Test button twice, OSD 'TT ' appears. The functions described below are available by pressing the two numbers. To release the Test Mode 2, press 0 twice, or switch the TV into Stand-by Mode.

00	switch Test Mode 2 off
01	picture maximum
02	picture minimum
03	Volume 35%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Ageing Condition (Volume min., Picture max., Brightness max.
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off)
09	"Menu" Flag request
10	Tenth entry is deleted
11	dummy
12	dummy
13	dummy
14	Forced AV 16:9 detection on/off
15	Read factory setting from NVM Reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last Power Memory)
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM.
17	Preset Label for AV Sources
18	RGB Priority on/off
19	Clear all preset labels
20	Tenth entry is deleted
21	Sub Contrast
22	Sub Colour
23	Sub Brightness
24	Set destination = U RGB Priority = Off
25	Set destination = D RGB Priority = Off
26	Set destination = B RGB Priority = On
27	Set destination = K RGB Priority = Off
28	Set destination = L RGB Priority = Off
29	Set destination = E RGB Priority = Off

30	Tenth entry is deleted
31	Set Destination = A RGB Priority = On
32	dummy
33	Auto AGC
34	N/S Pin Adjust
35	Manual AGC Adjust
36	dummy
37	dummy
38	dummy
39	dummy
40	Tenth entry is deleted
41	Re-initialise NVM
42	Production use only
43	Initialise Geom Settings
44	Initialise all favorite pages = 100
45	Channel locks = off
46	IR Channel Pressetting Mode The channel presetting can be done by a Special IR Transmitter ( Ver 2 and above software only)
47	dummy
48	Set NVM testbyte to 44h
49	Erase the NVM Testbyte (this byte detects already stored NVM's) After selecting this function, switch TV Off and On -> the NVM will be preset by $\mu$ -Controller.

In Test Mode the Menu display is switchable by the Speaker-Off button.

**Note :** For Test Modes 41 - 49 it is necessary to ensure that the TV is set to Prog 59.



**SUB BRIGHTNESS ADJUSTMENT**

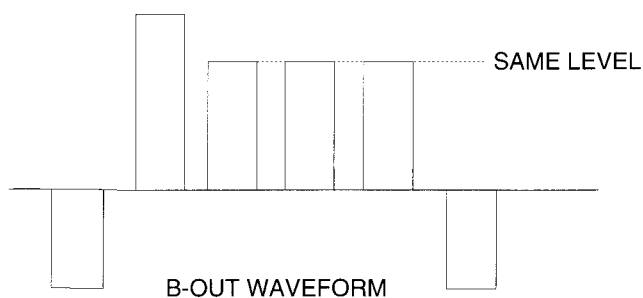
1. Input a Phillips pattern.
2. Enter into service mode and press 23.
3. Adjust data so that 0-IRE of grey scale and CUT-OFF 20-IRE are only slightly visible on screen.

**SUB CONTRAST ADJUSTMENT**

1. Input a video that contains a small 100% area on a Black Background.
2. Enter into service mode and press 01 to have PIC max followed by 21.
3. Connect oscilloscope to pin ① of CN703 (R OUT) and adjust HWB Red data of TDA8366 1 to obtain 2.3Vp-p.

**SUB COLOR ADJUSTMENT**

1. Input a PAL color bar signal.
2. Connect an oscilloscope to pin ③ of CN703 (B OUT) on the C board.
3. Enter into service mode and press 22.
4. Adjust data so that the right sides of the waveform are set to the same level.

**I.F. COIL ADJUSTMENT (T101) - B/G, D/K, I AND L STANDARD FOR CONTINENTAL MODELS.**

1. Apply a 38.9MHz signal at 100dBuV to the input of SWF101.
2. Receive a channel so that the I.C. is selected for negative modulation.
3. Measure the voltage at the AFT test point and adjust (T101) to obtain 2.4V +/- 0.2V.

**I.F. COIL ADJUSTMENT (T101) - I, STANDARD FOR U.K. MODELS.**

1. Apply a 39.5MHz signal at 100dBuV to the input of SWF101.
2. Receive a channel so that the I.C. is selected for negative modulation.
3. Measure the voltage at the AFT test point and adjust (T101) to obtain 2.4V +/- 0.2V.

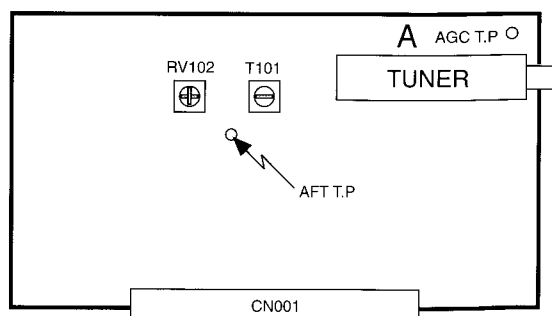
**L, BAND 1 ADJUSTMENT (RV102) - L, STANDARD FOR FRENCH MODELS.**

1. Apply a 33.95MHz signal at 100dBuV to the input of SWF101.
2. Receive a channel so that the I.C. is selected for positive modulation and system L band 1.
3. Measure the voltage at the AFT test point and adjust (RV102) to obtain 2.4V +/- 0.2V.

**Note :** Only adjust RV102 after T101 has been correctly adjusted.

**AGC ADJUSTMENT**

1. Receive an off- air signal.
2. Enter the service mode, ("Test" "Test") and 35.
3. Adjust the data so that there is no snow or cross - modulation visible on the screen.
4. Change the receiving off-air channel, and confirm the above status.

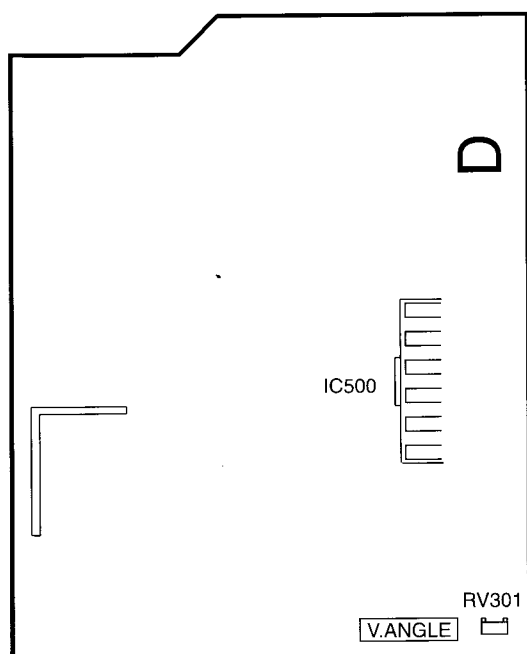


# DEFLECTION SYSTEM ADJUSTMENT

1. Enter into service mode.
2. Select and adjust each item in order to obtain the optimum image.

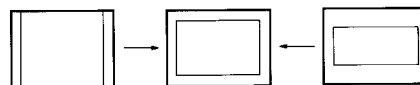
Item No	Adjustment item.	Data Amount
03	H SHIFT	ADJ.
04	H SIZE	ADJ.
05	PIN AMP	ADJ.
06	CORR PIN	ADJ.
07	TILT	ADJ.
08	V LINEAR	ADJ.
09	V SIZE	ADJ.
0A	S CORR	ADJ.
0B	V CENTER	ADJ.

Note : V ANGLE is adjusted by a Variable Resistor on the 'D' Board (RV301)

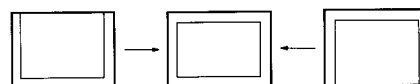


- D Board Component Side -

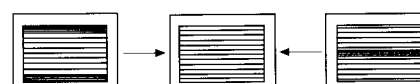
V SIZE



V CENTER



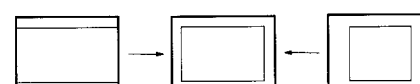
S CORR



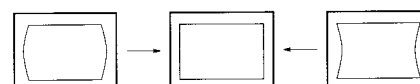
V LIN



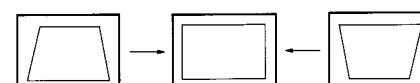
H SIZE



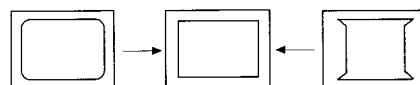
PIN AMP



TILT



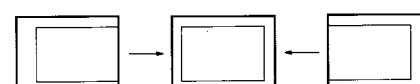
CORR PIN



V ANGLE



H SHIFT



### 4-3. BE3 SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-3 chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failiure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failiure to do so will report with continous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1., on fatal errors are reported with this method.

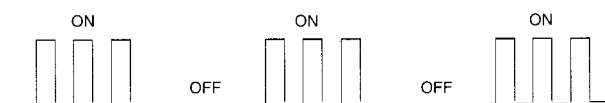
If a fatal error is found the set will simply stay in whichever state it was when the error occured, but if a non fatal error occurs the set will try to continue operation.

**Table 1**

Device	LED Error Count	Fatal Error
NVM	2 .. 9	√
Teletext	10	
Jungle	11	√
Video_sw	12	
Tuner	13	√
Nicam	14	
Audio_cont	15	√

Flash Timing Example : e.g. error number 3.

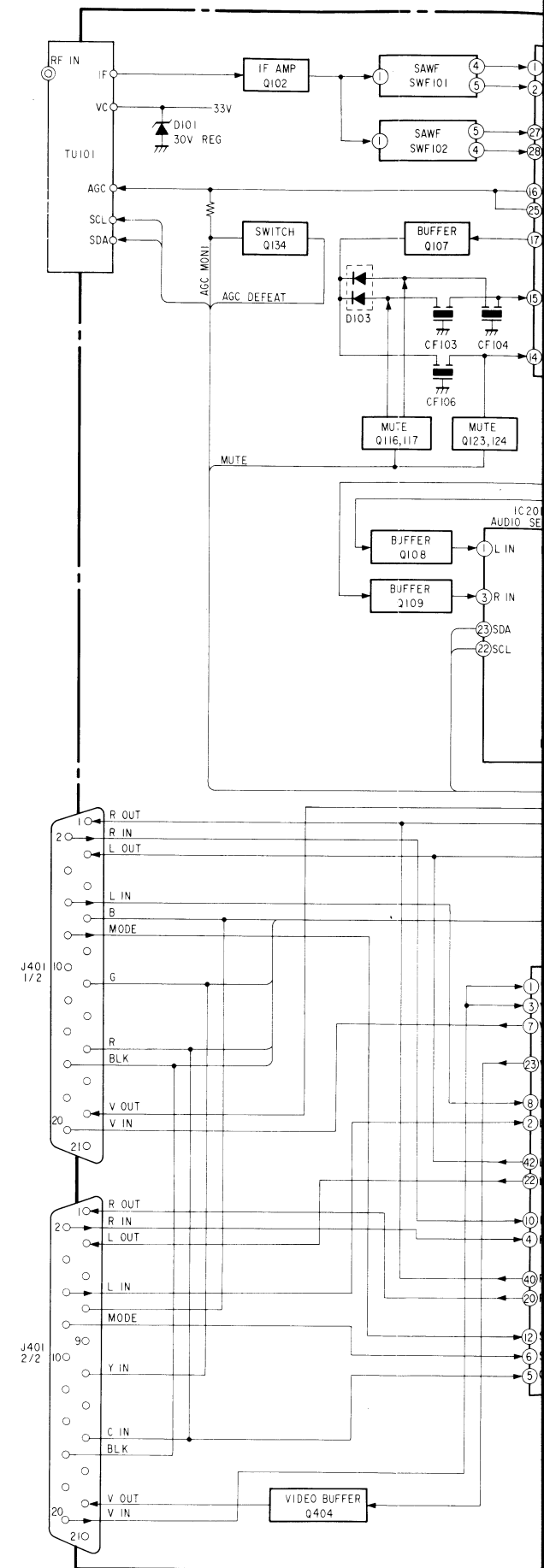
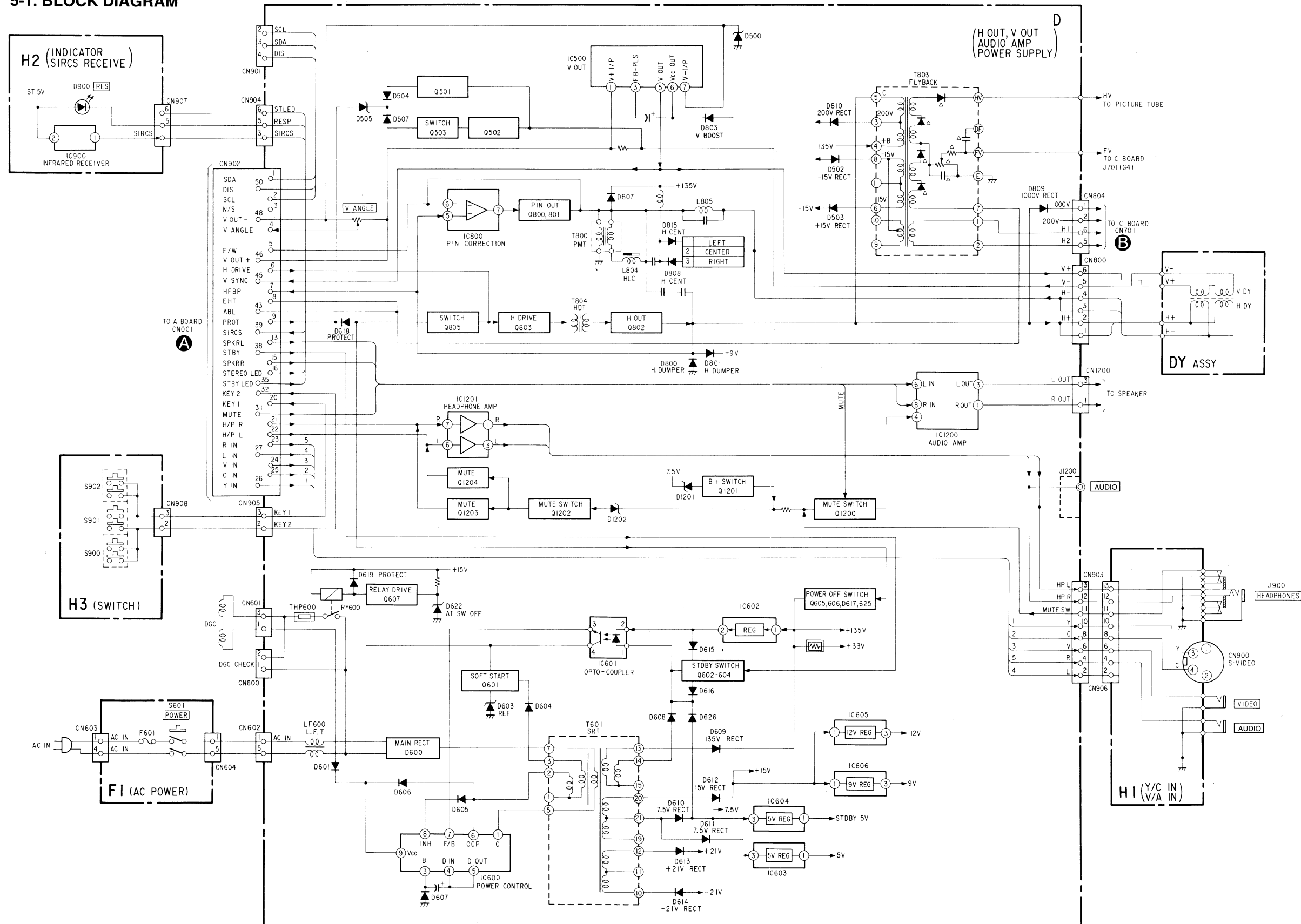
Stby LED



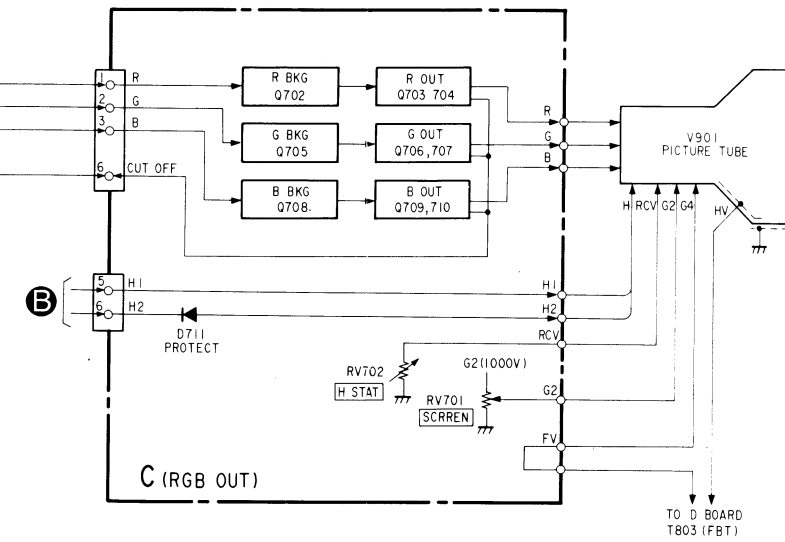
MEMO

Lined area for writing the memo.

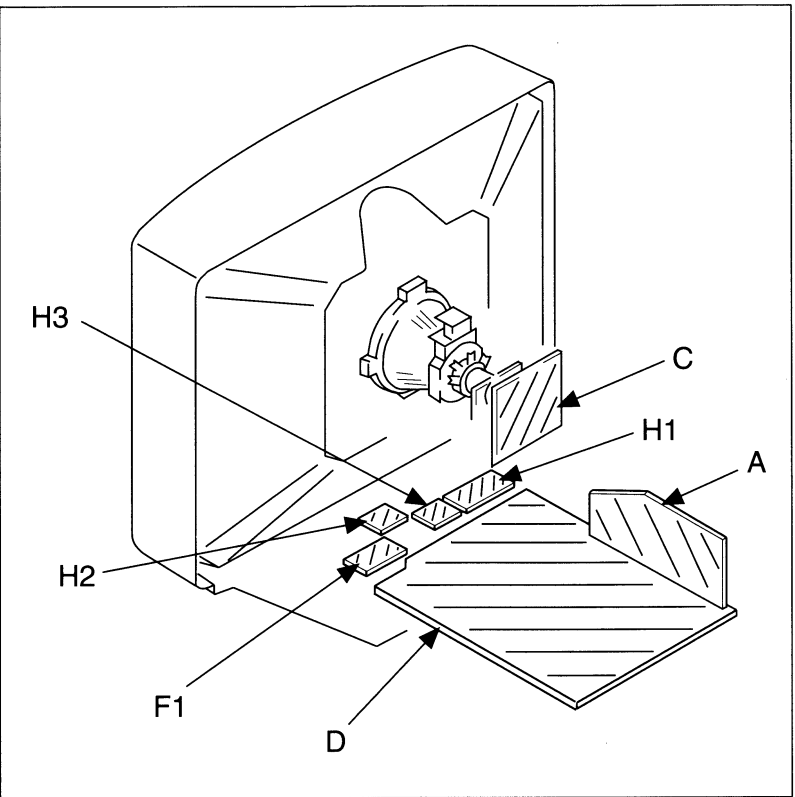
## 5-1. BLOCK DIAGRAM

SECTION 5  
DIAGRAMS





5-2. CIRCUIT BOARDS LOCATION



Reference information

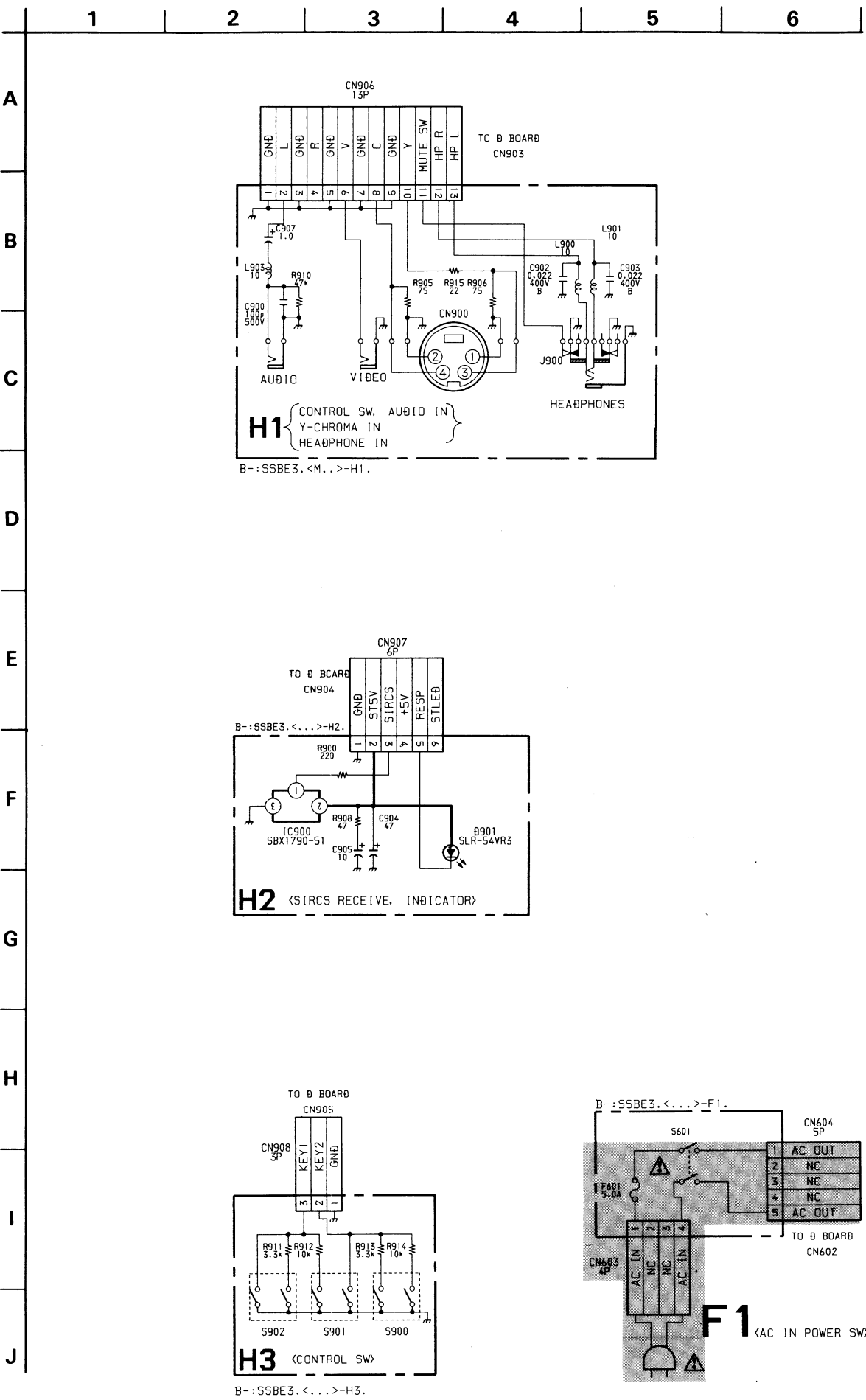
RESISTOR	RN	: METAL FILM
	RC	: SOLID
	FPRD	: NONFLAMMABLE CARBON
	FUSE	: NONFLAMMABLE FUSIBLE
	RS	: NONFLAMMABLE METAL OXIDE
	RB	: NONFLAMMABLE CEMENT
	RW	: NONFLAMMABLE WIREWOUND
	*	: ADJUSTMENT RESISTOR
COIL	LF-8L	: MICRO INDUCTOR
CAPACITOR	TA	: TANTALUM
	PS	: STYROL
	PP	: POLYPROPYLENE
	PT	: MYLAR
	MPS	: METALIZED POLYESTER
	MPP	: METALIZED POLYPROPYLENE
	ALB	: BIPOLAR
	ALT	: HIGH TEMPERATURE
	ALR	: HIGH RIPPLE

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

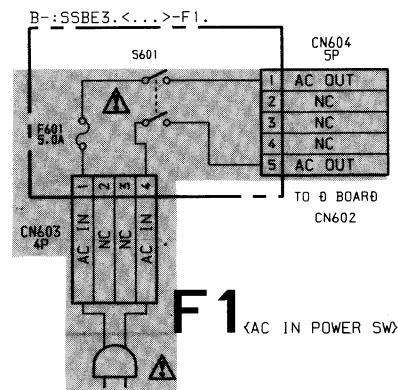
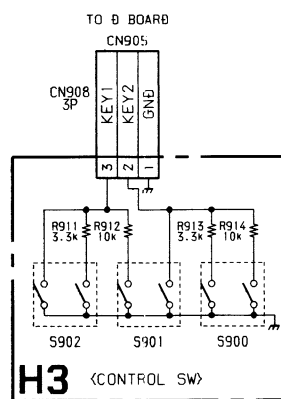
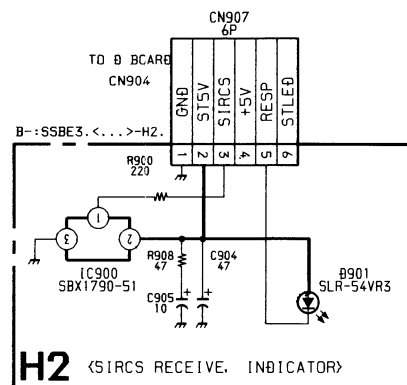
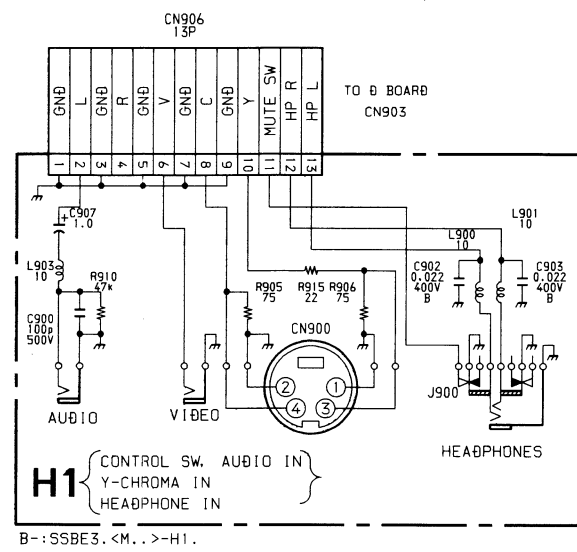
Note: Les composants identifiés par une trame et par une marque sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

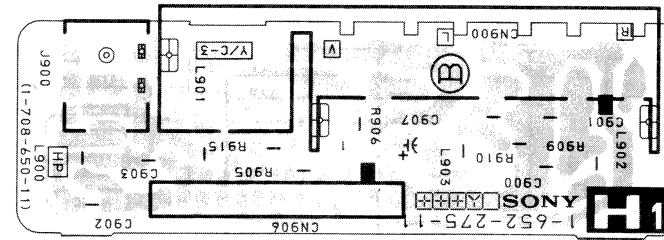
- Note:
- All capacitors are in  $\mu F$  unless otherwise noted.  
 $pF$ :  $\mu \mu F$  50WV or less are not indicated except for electrolytic.
  - Indication of resistance, which dose not have one for rating electrical power, is as follows.  
Pitch: 5mm  
Rating electrical power:  $\frac{1}{4}W$
  - Chip resistor is in  $\frac{1}{10}W$ .
  - All resistors are in ohms.  
 $k \Omega = 1000 \Omega$ ,  $M \Omega = 1000K \Omega$
  - : nonflammable resistor.
  - : fusible resistor.
  - $\Delta$ : internal component.
  - : panel designation or adjustment for repair.
  - All variable and adjustable resistors have charactristic curve B, unless otherwise noted.
  - All voltages are in V.
  - Readings are taken with a  $10M \Omega$  digital multimeter.
  - Readings are taken with a color-bar signal input.
  - Voltage variations may be noted due to normal production tolerances.
  - : B+ bus.
  - : B- bus.
  - : signal path.(RF)
  - : earth - ground
  - : earth - chassis



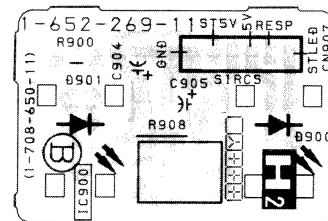




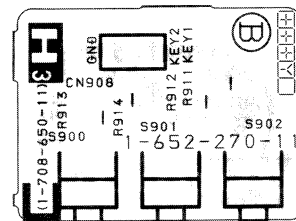
**H1** [ CONTROL SW, AUDIO IN  
Y-CHROMA IN, HEADPHONE IN



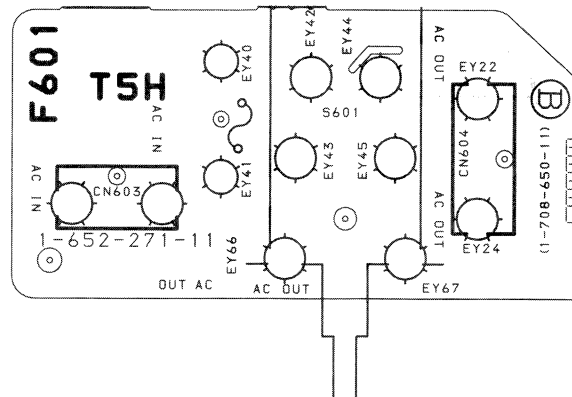
– H2 BOARD –



– H3 BOARD –



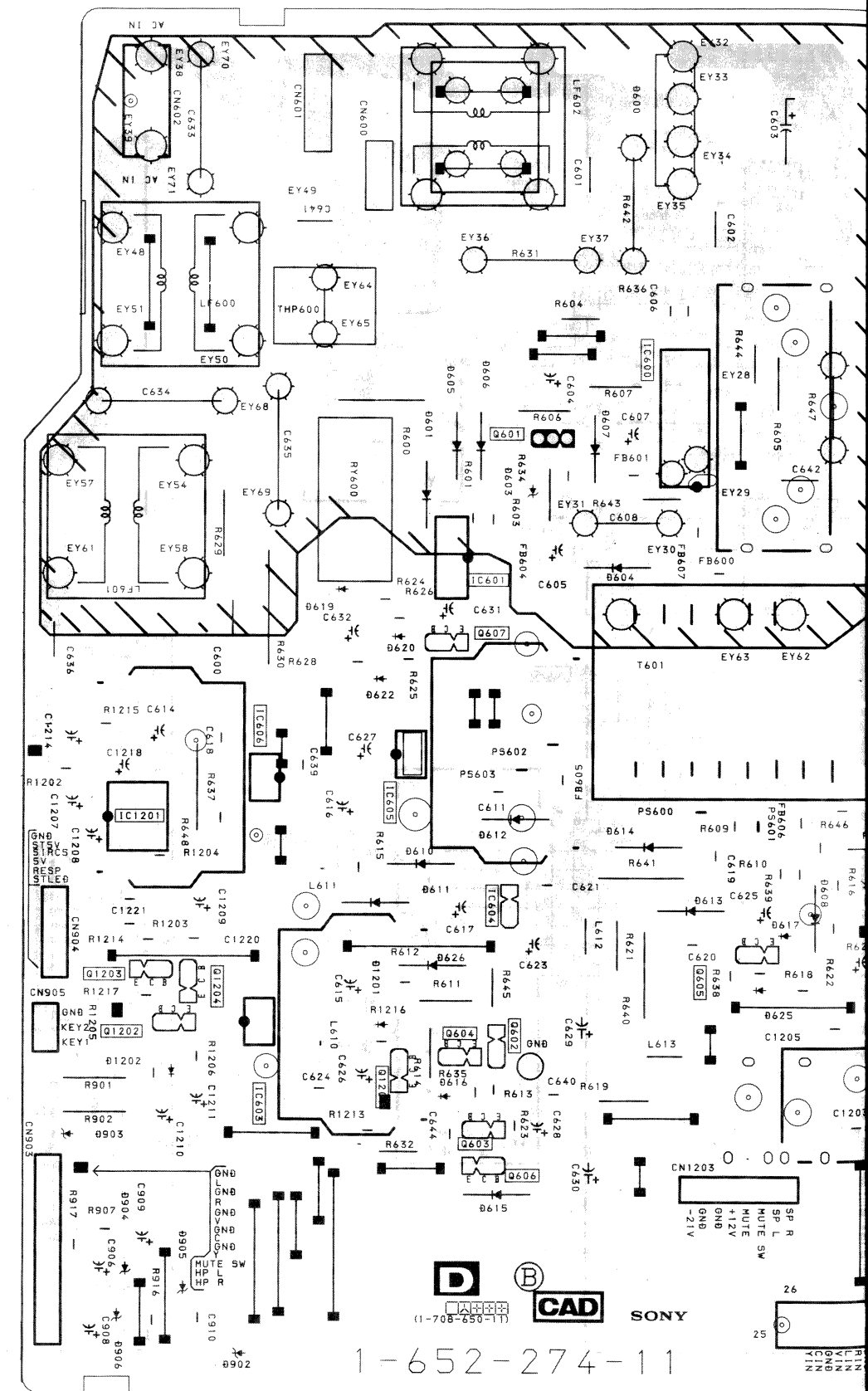
**– F1 BOARD –**



**H3** [CONTROL SW]

**F1** [AC IN POWER SW]

**D** HV OUT  
PIN OUT  
POWER SUPPLY



H2

SIRCS RECEIVE  
INDICATOR

H3

[CONTROL SW]

F1

[AC IN POWER SW]

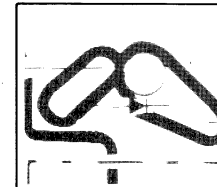
D

HV OUT  
PIN OUT  
POWER SUPPLY

- D BOARD -

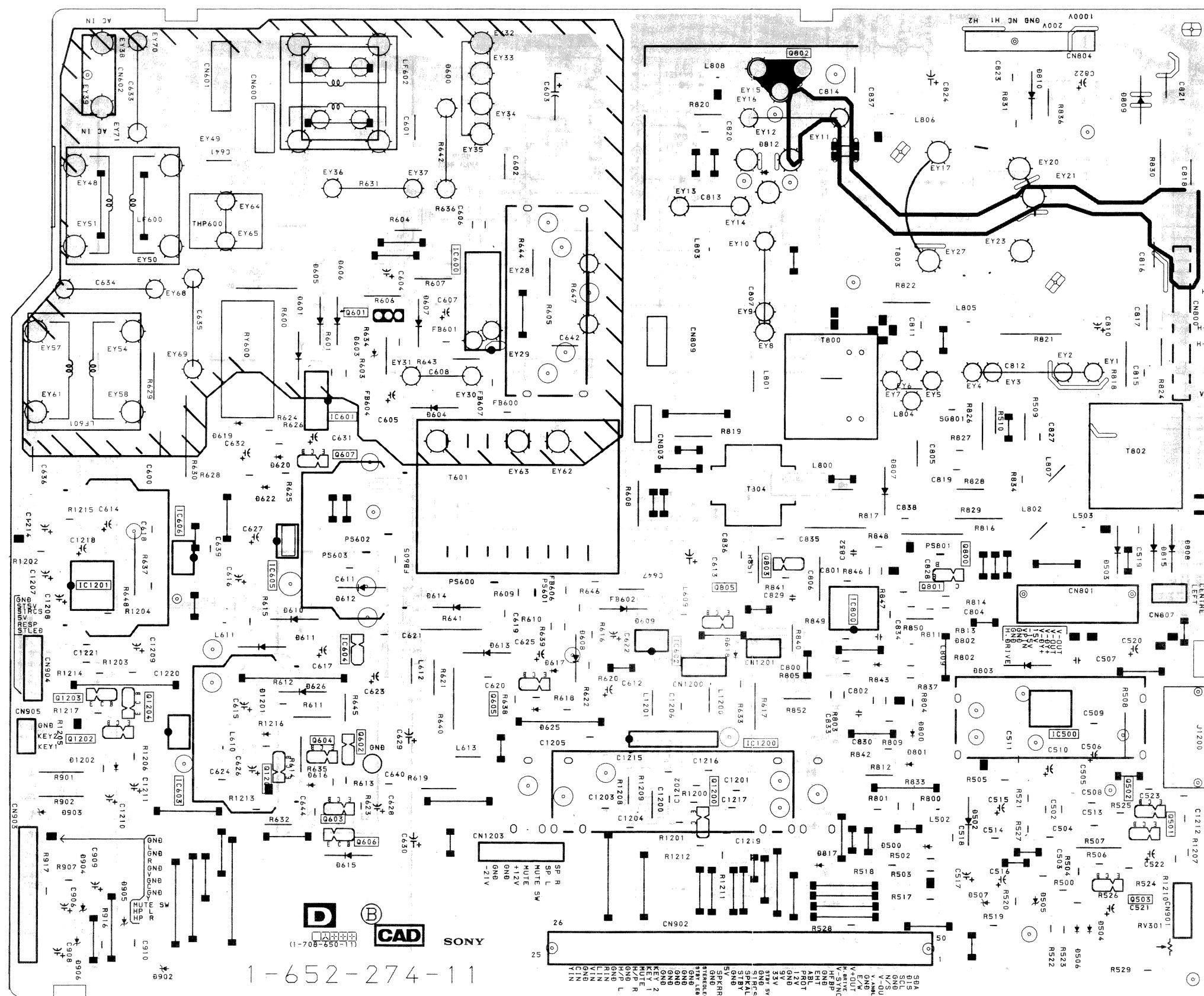
KV-M254

KV-M254



## NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.



## IC

IC500	G - 10
IC600	C - 5
IC601	D - 4
IC602	F - 7
IC603	H - 2
IC604	F - 4
IC605	F - 3
IC606	E - 2
IC800	F - 8
IC1200	G - 7
IC1201	F - 1

## TRANSISTOR

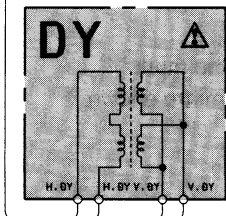
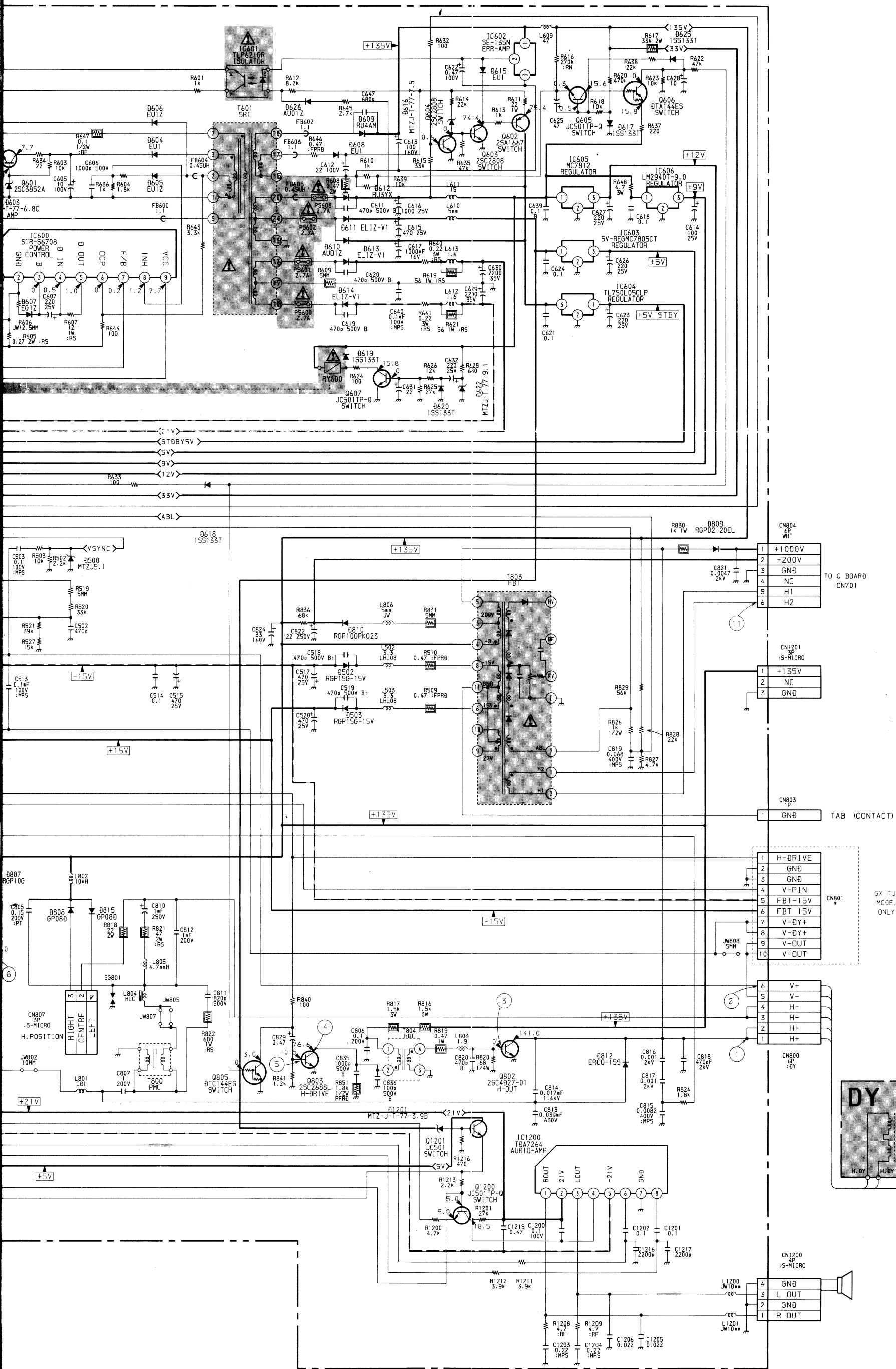
Q501	H - 11
Q502	H - 11
Q503	I - 11
Q601	C - 4
Q602	G - 4
Q603	H - 3
Q604	G - 3
Q605	G - 5
Q606	H - 4
Q800	E - 4
Q801	F - 9
Q802	A - 8
Q803	F - 7
Q805	F - 7
Q1200	H - 7

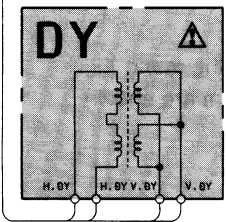
## DIODE

D500	G - 9
D502	G - 9
D503	F - 10
D504	I - 10
D505	I - 10
D506	I - 10
D507	G - 9

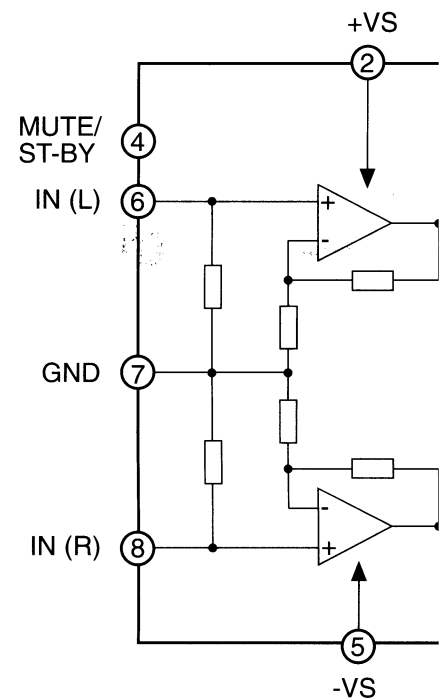
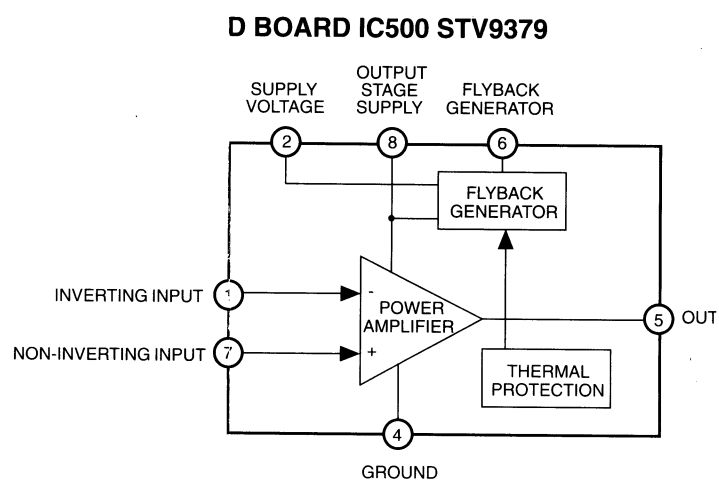
D600	A - 4
D601	C - 3
D603	D - 4
D604	D - 4
D605	C - 3
D606	C - 4
D607	C - 4
D608	F - 6
D609	F - 6
D610	F - 3
D611	F - 3
D612	F - 4
D613	F - 5
D614	F - 4
D615	H - 4
D616	G - 3
D617	F - 5
D618	F - 7
D619	D - 2
D620	E - 3
D622	E - 3
D625	G - 5
D626	G - 3
D800	G - 9
D801	G - 9
D802	F - 9
D803	F - 9
D807	E - 9
D808	E - 11
D809	A - 11
D810	A - 10
D812	B - 7
D815	E - 11
D817	H - 8
D902	I - 2
D903	H - 1
D904	H - 1
D905	H - 2
D906	I - 1



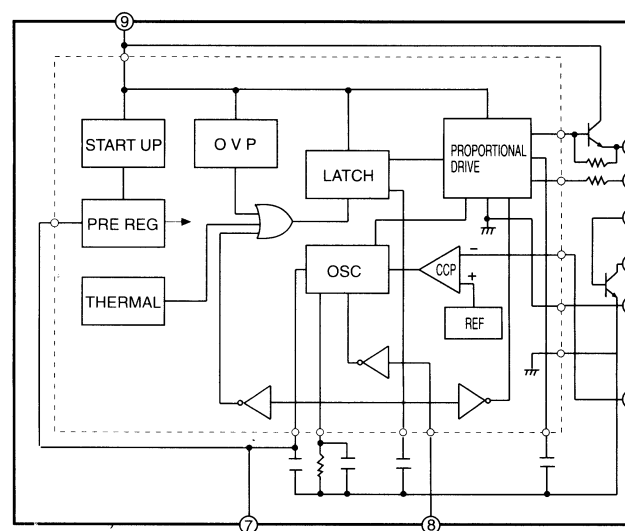




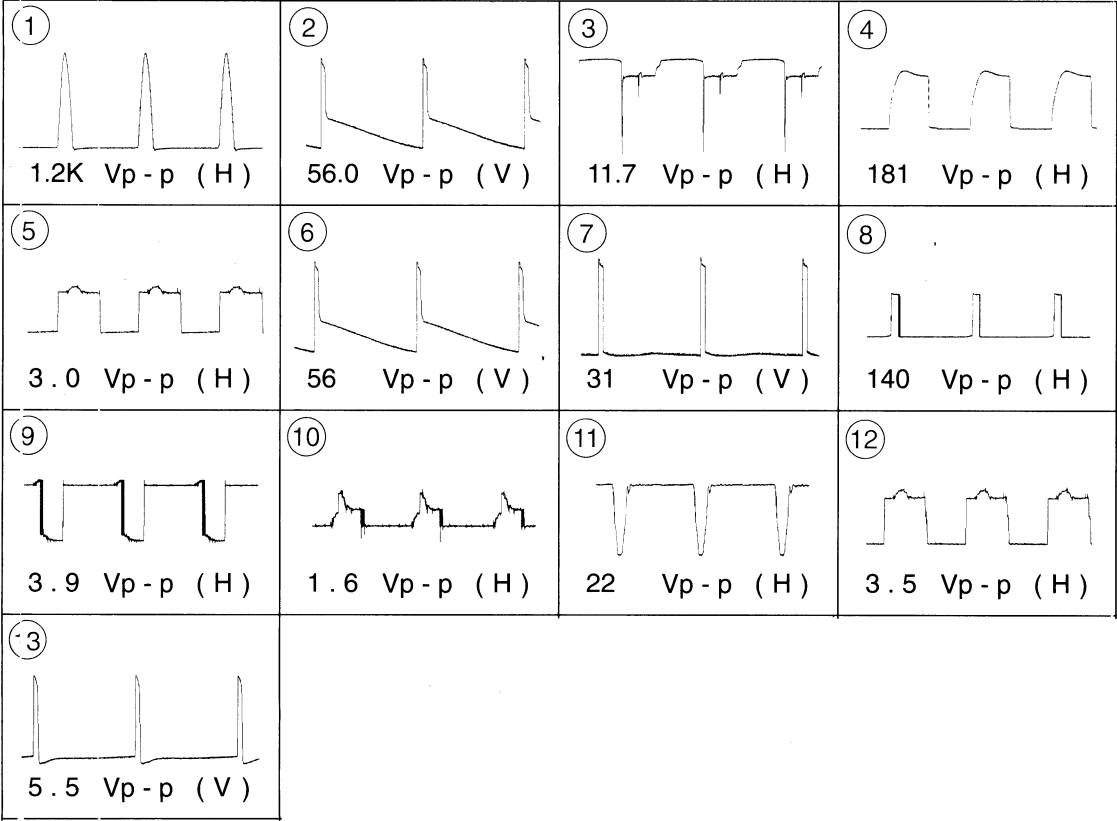
## WAVEFORMS D BOARD



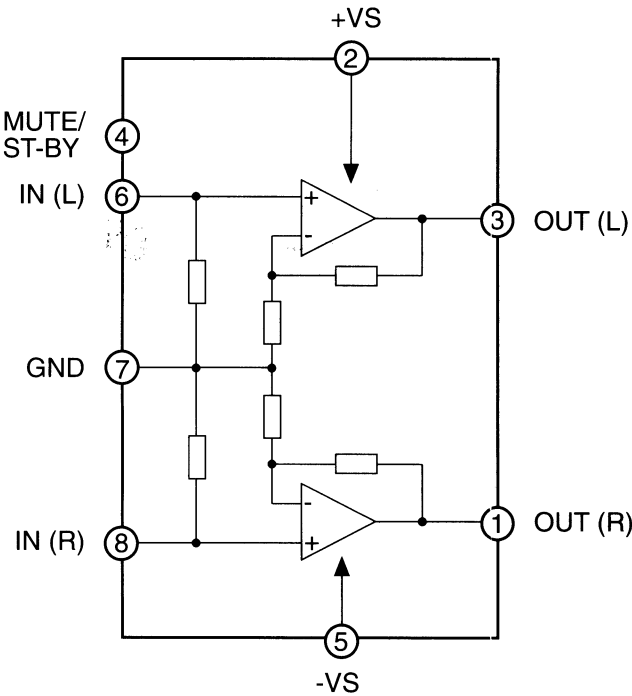
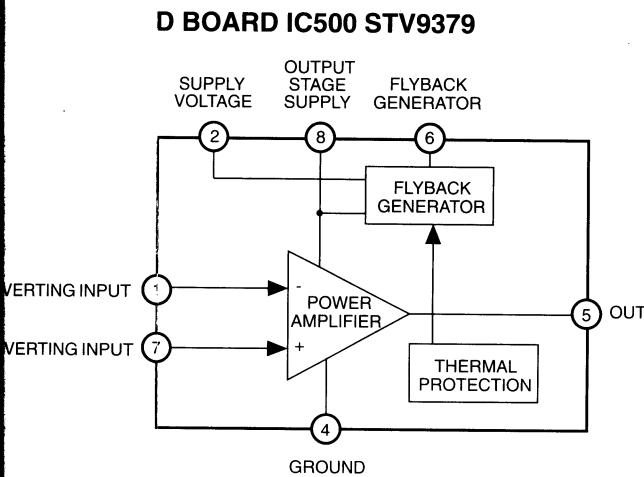
**D BOARD IC600 STR-S6708**



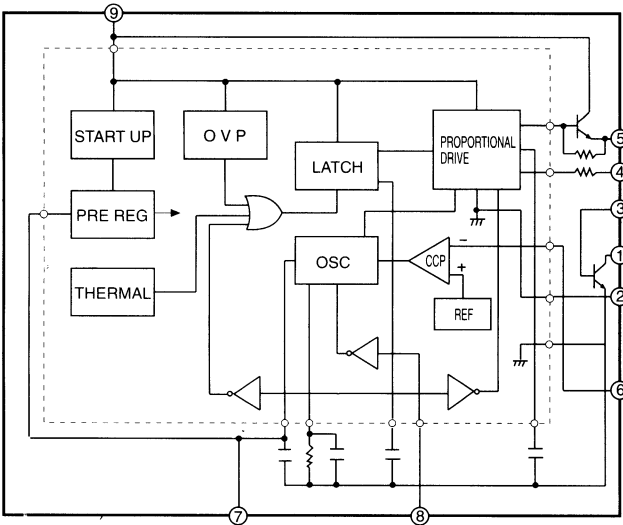
WAVEFORMS D BOARD

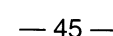


D BOARD IC1200 TDA7264

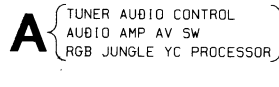


D BOARD IC600 STR-S6708





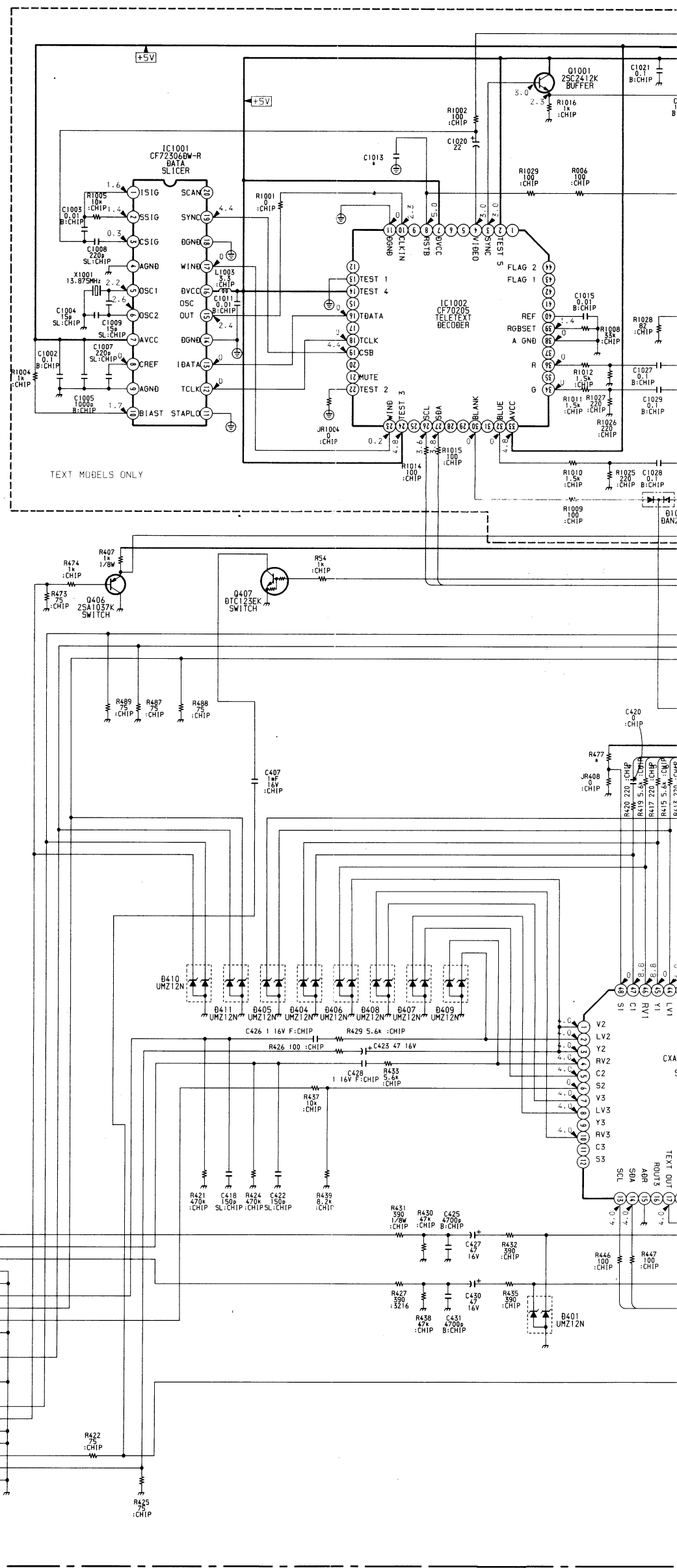




Voltages indicated with the mark ※ on the schematic diagram are shown

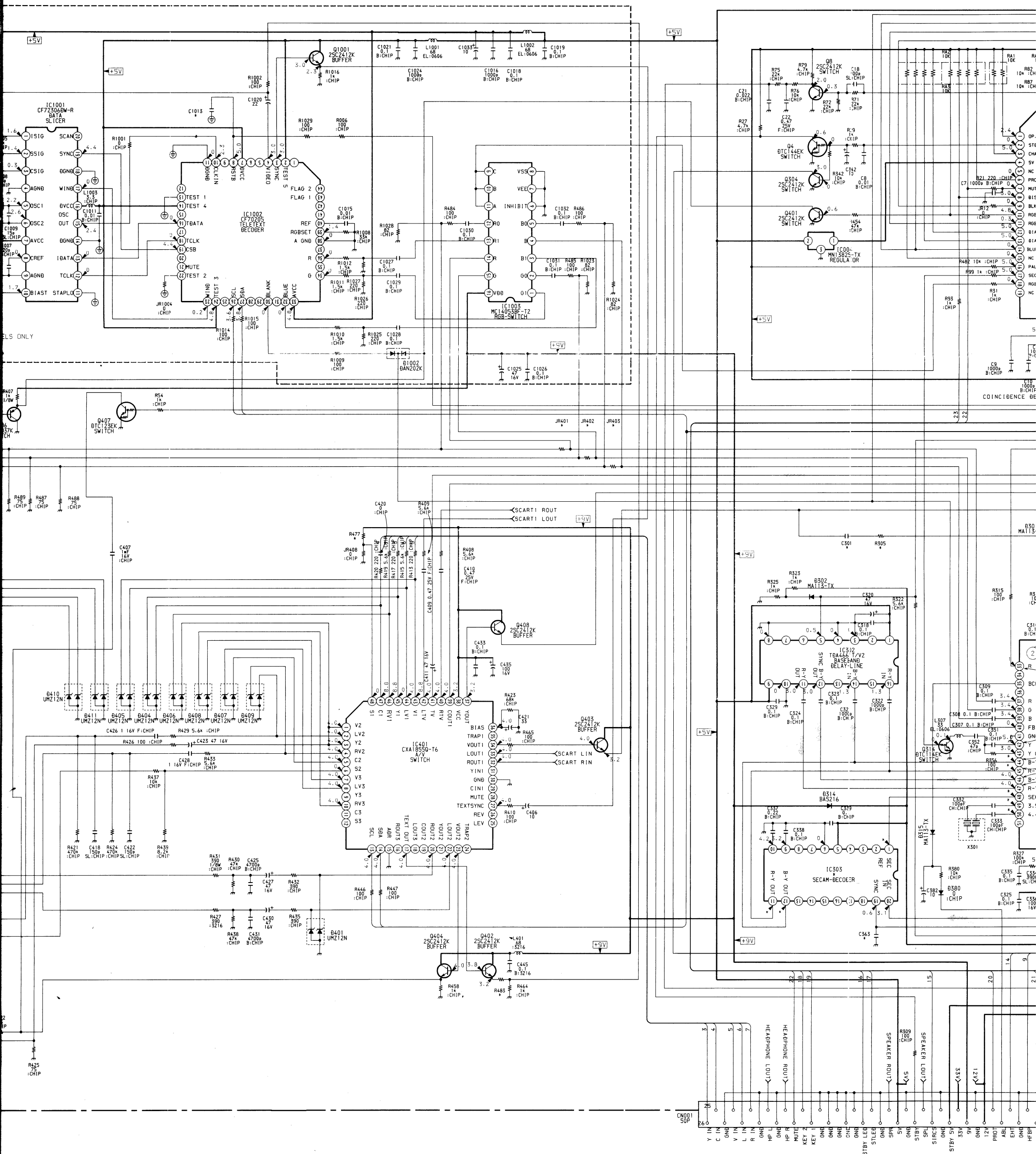
## A BOARD

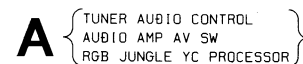
IC	Pin	PAL	SECAM	NTSC 3.58	NTSC 4.43
IC301	17	4.0	4.0	4.0	0
	35	3.6	2.5	3.5	3.5
	44	1.5	3.1	1.5	1.5
	45	1.5	3.0	1.5	1.5
	48	1.7	4.4	1.6	1.7
	49	1.4	1.4	2.0	1.4
	50	2.0	2.0	1.4	2.0
	63	3.4	2.5	2.2	2.5
IC303	1	1.7	4.4	1.6	1.7
	11	1.5	3.0	1.5	1.5
	12	1.5	3.1	1.5	1.5



R-:SSRF3R<M...>-A...



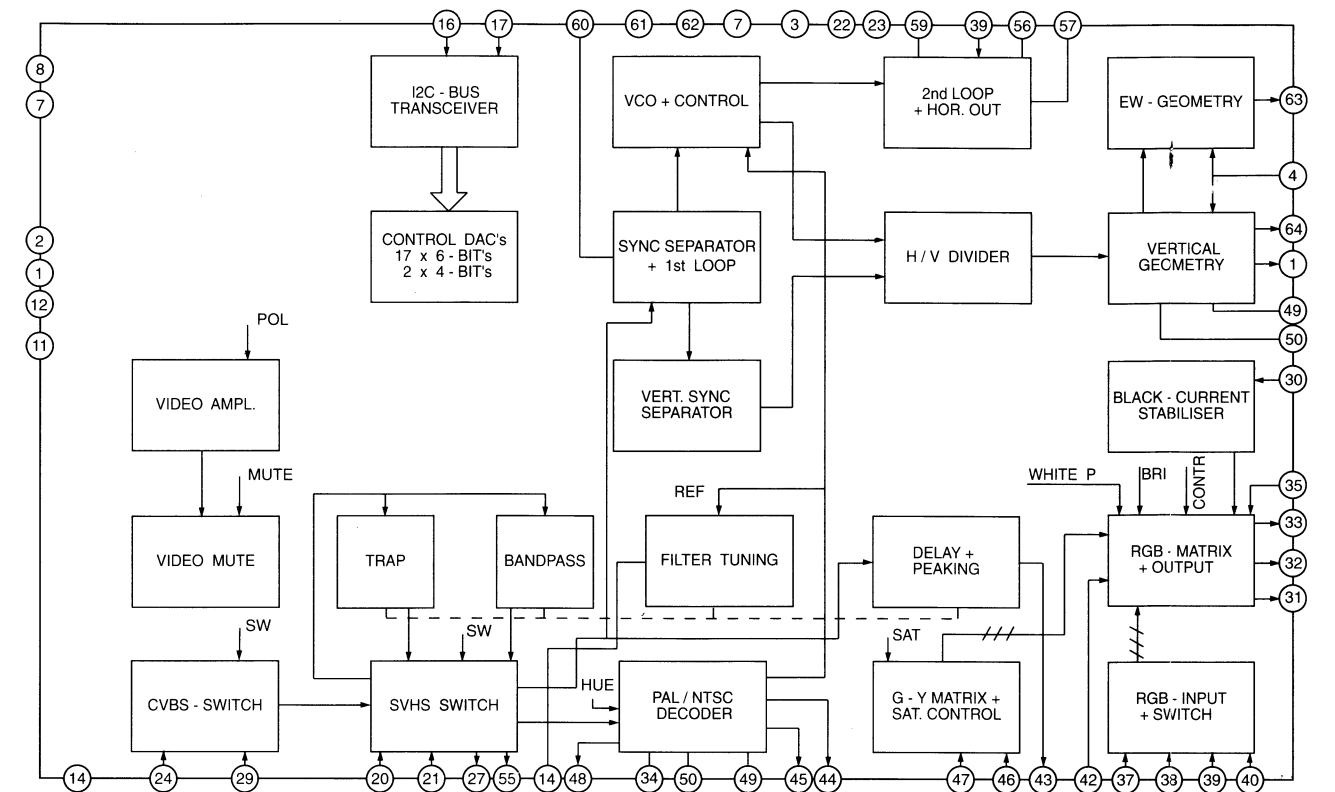




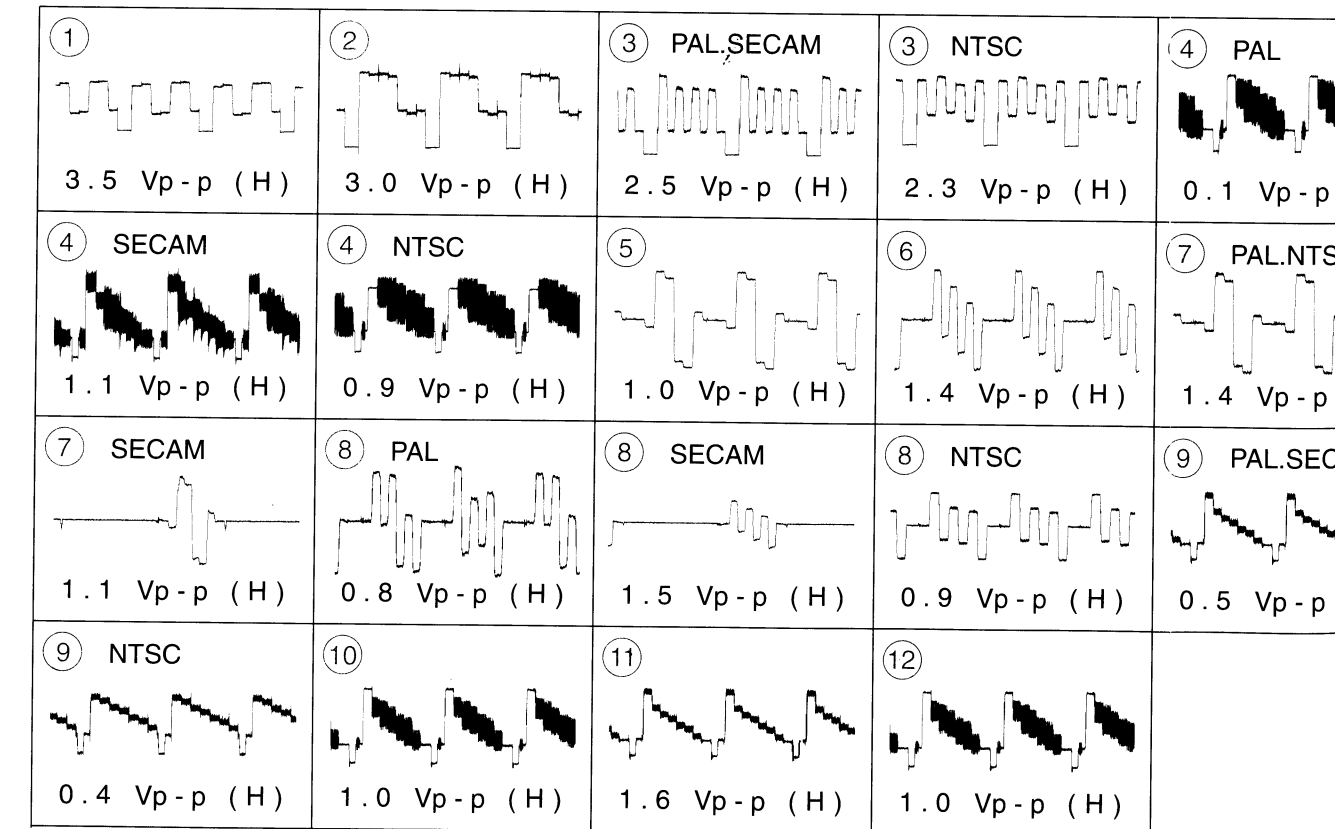
## A BOARD \* MARK

Model	M2541A	M2540B	M2540D	M2541D	M2540E	M2541E	M2540K	M2541K	M2541L	M2541U
C15	33PF	33PF	33PF	33PF	-	-	-	-	33PF	33PF
C101	22UF	4.7UF	22UF	22UF	22UF	22UF	22UF	22UF	22UF	22UF
C143	-	100UF	-	-	-	-	-	-	-	-
C144	-	1UF	-	-	-	-	-	-	-	-
C154	180PF	33PF	180PF	180PF	180PF	180PF	180PF	180PF	47PF	47PF
C157	68PF	68PF	68PF	120PF	68PF	68PF	68PF	68PF	100PF	100PF
C163	-	1000PF	-	-	-	-	-	-	-	-
C301	-	-	-	-	-	-	-	-	470PF	470PF
C347	68PF	68PF	68PF	68PF	10PF	10PF	10PF	10PF	68PF	68PF
C348	68PF	68PF	68PF	68PF	10PF	10PF	10PF	10PF	68PF	68PF
C349	68PF	68PF	68PF	68PF	10PF	10PF	10PF	10PF	68PF	68PF
C355	47PF	47PF	47PF	47PF	47PF	47PF	47PF	47PF	68PF	68PF
C363	22PF	22PF	22PF	22PF	22PF	22PF	22PF	22PF	-	-
C1013	1MF	-	-	1MF	-	-	-	-	1MF	1MF
CF101	-	EFCV4045A4	EFCV4045A4	EFCV4045A4	EFCV4045A4	EFCV4045A4	EFCV4045A4	EFCV4045A4	-	-
CF102	5.5MHZ	6.5MHZ	5.5MHZ	5.5MHZ	5.5MHZ	5.5MHZ	5.5MHZ	5.5MHZ	6.0MHZ	6.0MHZ
CF103	5.5MHZ	5.5MHZ	5.5MHZ	5.5MHZ	5.5MHZ	5.5MHZ	5.5MHZ	5.5MHZ	-	-
CF104	-	6.0MHZ	6.5MHZ	6.5MHZ	-	-	6.5MHZ	6.5MHZ	6.0MHZ	6.0MHZ
CF109	TRAP	TRAP	TRAP	TRAP	-	-	-	-	-	-
D12	-	MA715-TX	-	-	-	MA715-TX	-	-	-	-
D102	-	DAN202K	-	-	-	-	-	-	-	-
D103	-	DAN202K	DAN202K	DAN202K	-	-	DAN202K	DAN202K	-	-
IC001	CXP85228-113Q	CXP85228-112Q	CXP85228-112Q	CXP85228-112Q	CXP85228-113Q	CXP85228-113Q	CXP85228-112Q	CXP85228-112Q	CXP85228-113Q	CXP85228-113Q
IC303	-	TDA8395T	TDA8395T	TDA8395T	-	-	TDA8395T	TDA8395T	-	-
JR122	0	-	0	0	0	0	0	0	0	0
JR123	0	-	0	0	0	0	0	0	0	0
JR125	0	-	-	-	0	0	-	-	-	-
JR127	-	-	-	-	-	-	-	-	0	0
JR401	-	0	0	-	0	-	0	-	-	-
JR402	-	0	0	-	0	-	0	-	-	-
JR403	-	0	0	-	0	-	0	-	-	-
L104	-	100UH	-	-	-	-	-	-	-	-
L105	15UH	5.6UH	15UH	15UH	15UH	15UH	15UH	15UH	15UH	15UH
L108	10UH	27UH	10UH	10UH	10UH	10UH	10UH	10UH	10UH	10UH
Q13	-	2SC2412K	-	-	-	2SC2412K	-	-	-	-
Q103	-	DTC114EK	-	-	-	-	-	-	-	-
Q104	-	DTC114EK	-	-	-	-	-	-	-	-
Q105	-	DTC114EK	-	-	-	-	-	-	-	-
Q116	-	DTC144EK	DTC144EK	DTC144EK	-	-	DTC144EK	DTC144EK	-	-
Q117	-	DTC144EK	DTC144EK	DTC144EK	-	-	DTC144EK	DTC144EK	-	-
Q121	-	2SA1162-G	-	-	-	-	-	-	-	-
Q125	-	DTC114EK	-	-	-	-	-	-	-	-
R1	-	1K	-	-	-	-	-	-	-	-
R16	-	1K	-	-	-	-	-	-	-	-
R134	-	2.2K	2.2K	2.2K	-	-	2.2K	2.2K	-	-
R135	-	2.2K	2.2K	2.2K	-	-	2.2K	2.2K	-	-
R143	-	2.2K	2.2K	2.2K	-	-	2.2K	2.2K	-	-
R147	220	180	220	220	220	220	220	220	330	330
R150	0	0	0	0	0	0	0	0	1.5K	1.5K
R161	180	180	180	180	180	180	180	180	820	820
R193	-	1K	-	-	-	-	-	-	-	-
R199	330	1.2K	330	330	330	330	330	330	1K	1K
R305	-	-	-	-	-	-	-	-	1K	1K
R351	6.8K	6.8K	6.8K	6.8K	-	-	-	-	6.8K	6.8K
R365	100	100	100	100	100	100	100	100	120	120
R477	-	-	-	-	-	-	-	-	5.6K	5.6K
R483	1.2K	1.2K	1.2K	1.2K	1.2K	1.2K	1.2K	1.2K	820	820
RV102	-	22K	-	-	-	-	-	-	-	-
SWF101	K3953M	K3953M	K3953M	K3953M	K3953M	K3953M	K3953M	K3953M	K3953M	J3950M
SWF102	K9350M	K9453M	K9350M	K9350M	K9350M	K9350M	K9350M	K9350M	K9350M	K9350M
TU101	UV-916H	UV-916H	UV-916H	UV-916H	UV-916H	UV-916H	UV-916H	UV-916H	UV-916H	U-944C

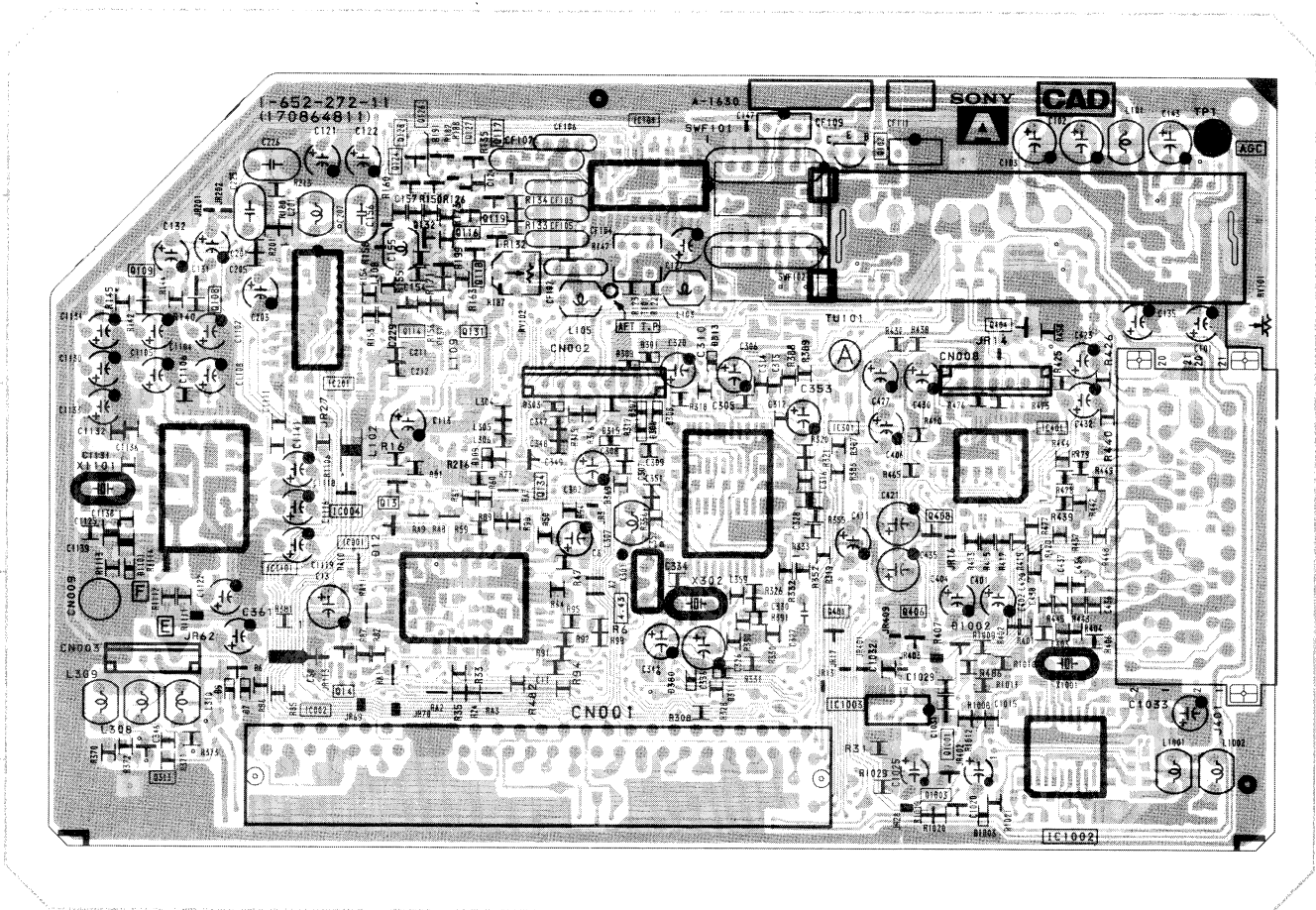
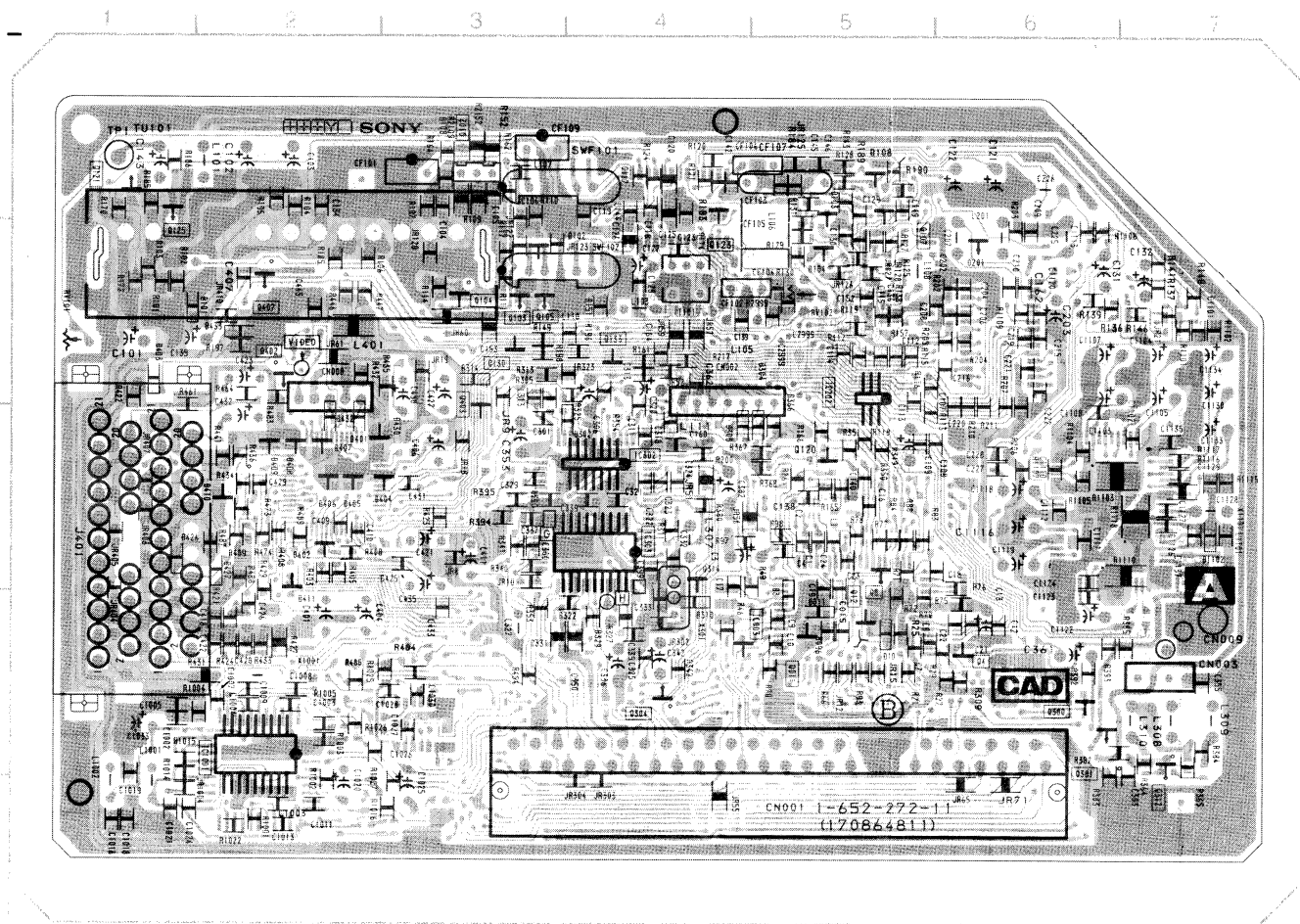
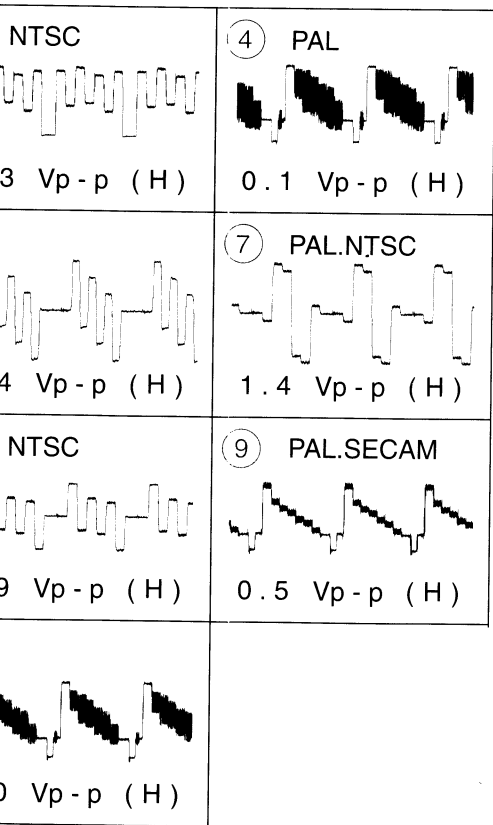
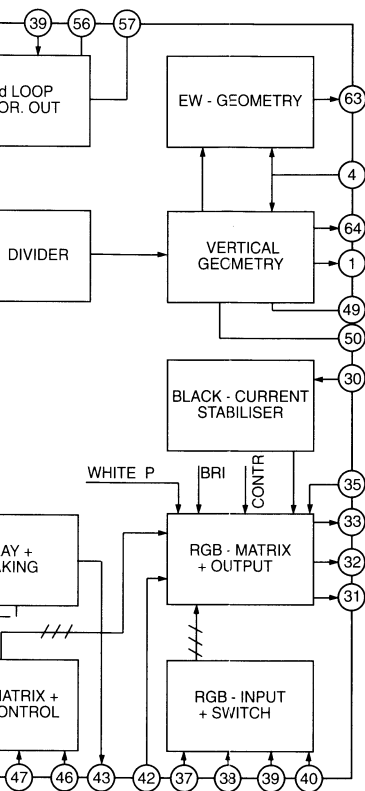
## A BOARD IC301 TDA8366T



## WAVEFORMS A BOARD



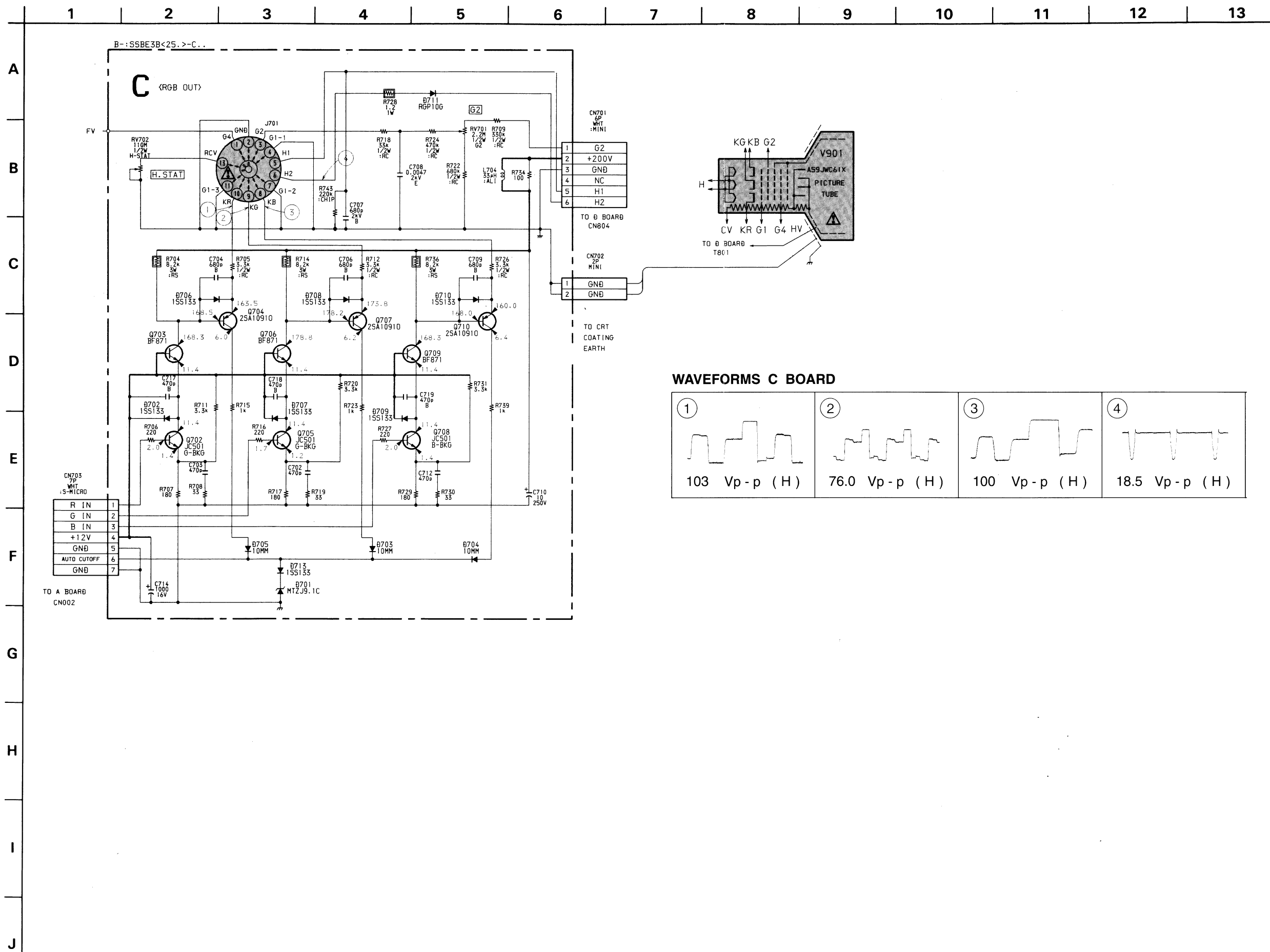
- A BOARD -



IC		Q313 J - 1	
IC001	H - 2	Q314	C - 4
IC002	I - 2	Q380	D - 6
IC101	F - 4	Q381	D - 6
IC201	G - 2	Q401	I - 5
IC202	B - 5	Q402	B - 2
IC301	H - 5	Q403	B - 3
IC302	C - 4	Q404	G - 6
IC303	C - 4	Q1001	I - 6
IC401	H - 6	Q1003	J - 5
IC1001	D - 2	DIODE	
IC1002	J - 6	D6	I - 2
IC1003	I - 5	D7	I - 2
IC1101	H - 2	D9	I - 2
TRANSISTOR		D11	D - 5
Q4	D - 6	D101	B - 2
Q8	C - 5	D102	B - 4
Q11	D - 5	D103	A - 5
Q12	C - 5	D201	B - 6
Q14	I - 2	D301	G - 4
Q102	F - 5, A - 3	D302	C - 4
Q103	B - 3	D303	H - 3
Q104	B - 3	D304	B - 5
Q105	B - 3	D305	C - 4
Q107	B - 5	D314	B - 3
Q108	G - 2	D380	I - 4
Q109	G - 1	D401	C - 2
Q114	G - 3	D402	C - 2
Q116	G - 3	D404	C - 2
Q117	F - 3	D405	C - 2
Q120	C - 5	D406	C - 2
Q121	A - 1	D407	C - 2
Q123	B - 4	D408	C - 2
Q124	F - 3	D409	C - 2
Q125	B - 1	D410	C - 2
Q130	B - 3	D411	D - 2
Q131	G - 3	D1002	I - 6
Q132	G - 3	D1003	J - 6
Q133	B - 4	D1101	H - 1
Q304	D - 4	D1102	C - 7
Q312	E - 7		

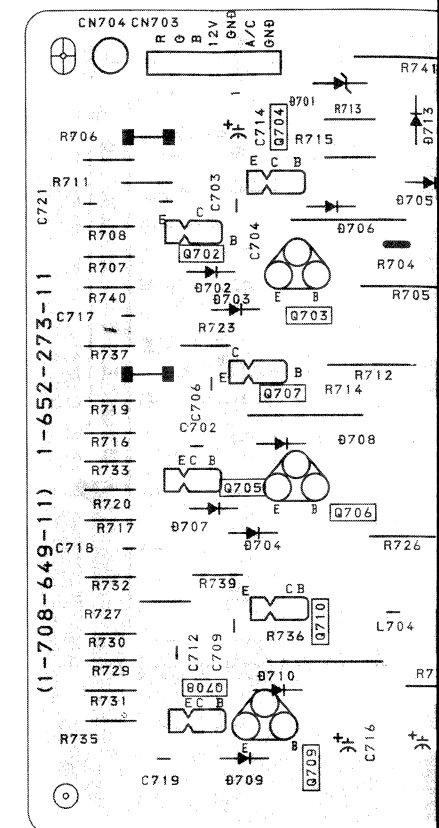
Note :

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.



C [RGB OUT]

- C BOARD -







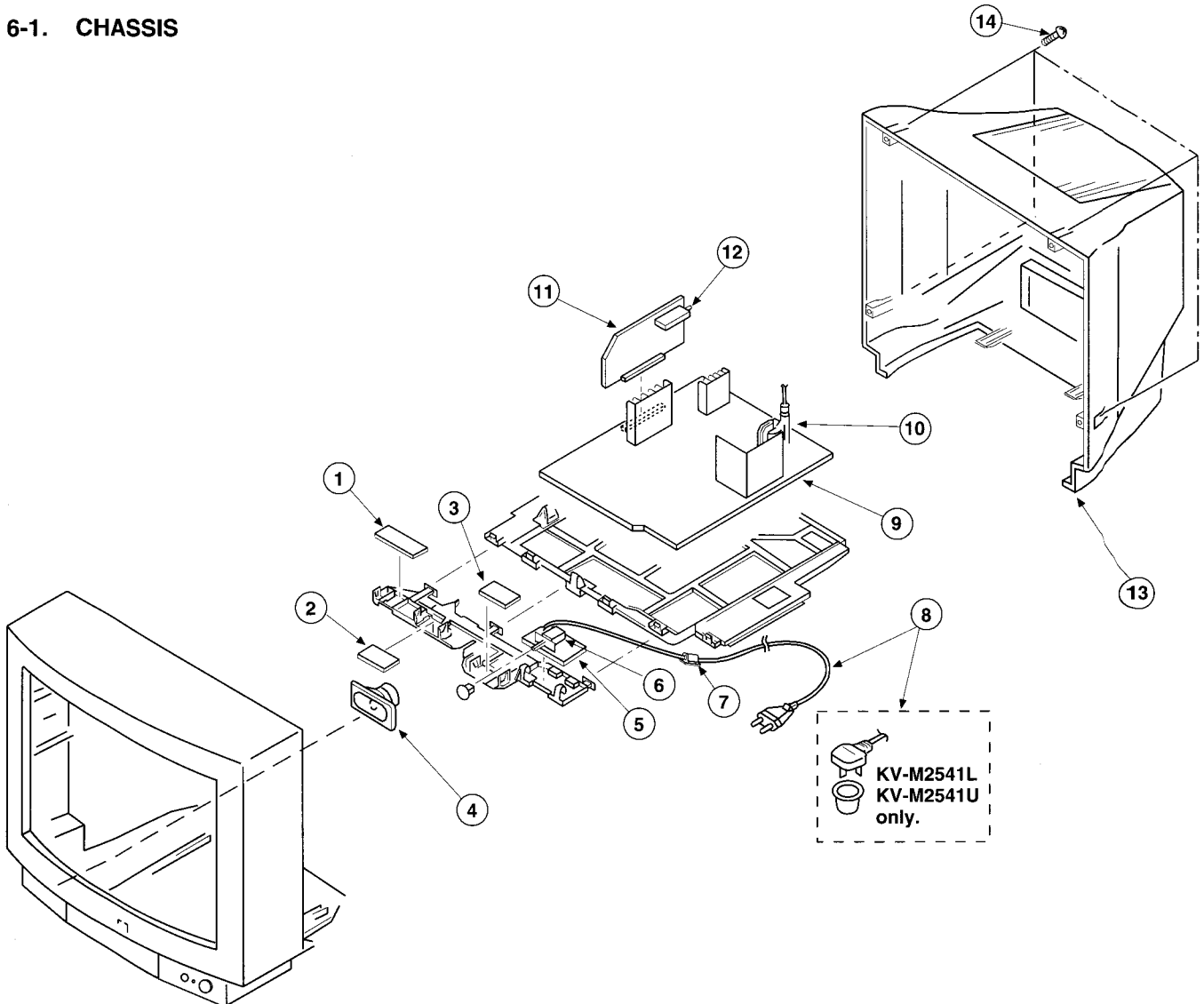
## SECTION 6

### EXPLODED VIEWS

**NOTE :**

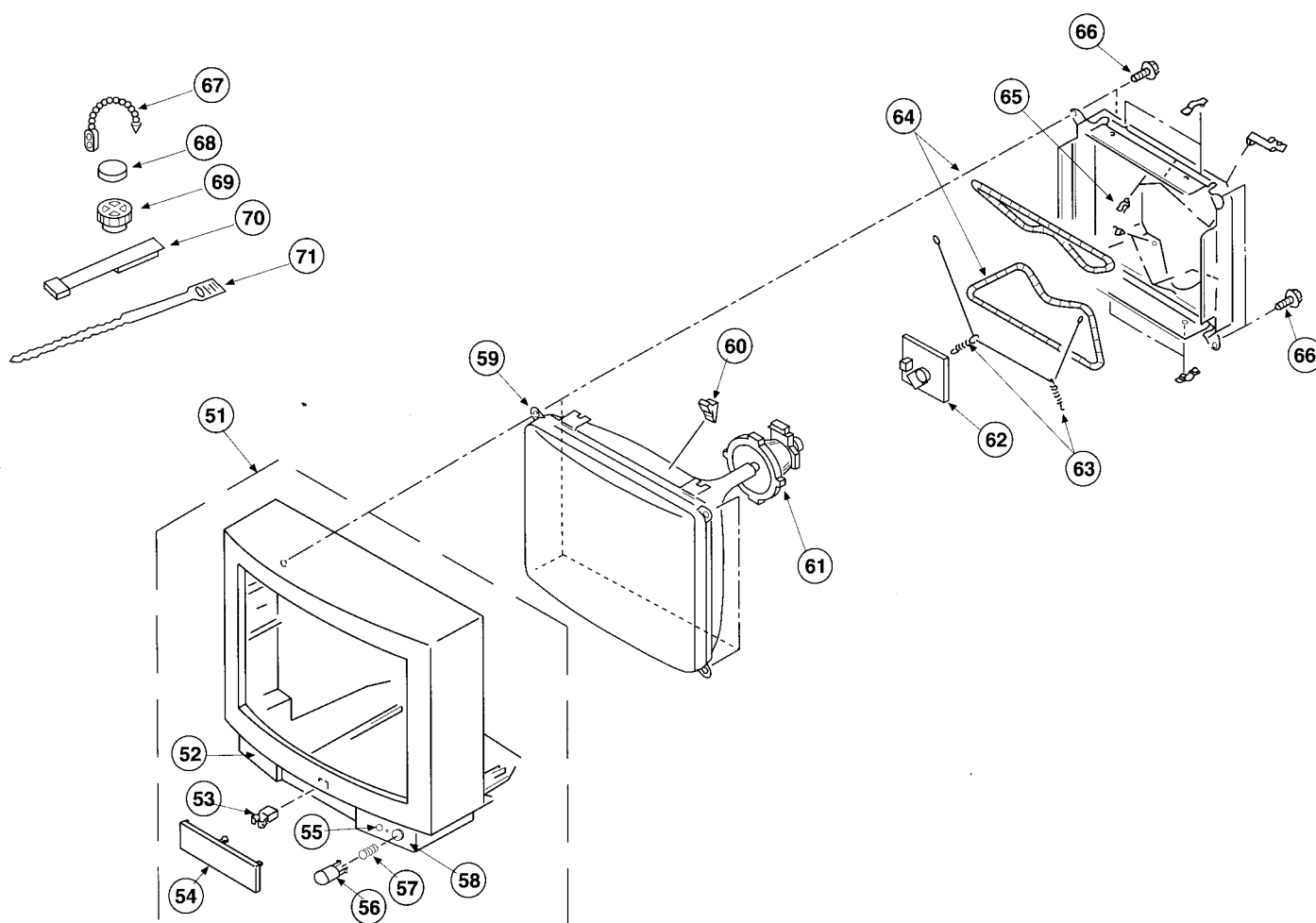
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked \* are critical for safety.  
Replace only with the part number specified.

**6-1. CHASSIS**

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	*1-652-275-11	H1 BOARD		10	1-453-169-11	FBT ASSY (UX1604A2)	
2	*1-652-270-11	H3 BOARD		11	*A-1632-239-A	A BOARD, COMPLETE (IV-M2541A)	
3	*1-652-269-11	H2 BOARD			*A-1632-240-A	A BOARD, COMPLETE (IV-M2540B)	
4	1-504-698-11	SPEAKER			*A-1632-236-A	A BOARD, COMPLETE (IV-M2540D)	
5	*1-652-271-11	F1 BOARD			*A-1632-235-A	A BOARD, COMPLETE (IV-M2541D)	
6	*1-571-433-11	SWITCH, PUSH (AC POWER)			*A-1632-226-A	A BOARD, COMPLETE (IV-M2540E)	
7	*4-389-201-11	HOLDER, AC CORD			*A-1632-202-A	A BOARD, COMPLETE (IV-M2541E)	
8	*1-751-680-11	CORD, POWER (WITH NOISE FILTER)			*A-1632-230-A	A BOARD, COMPLETE (IV-M2540K)	
		(KV-M2541A/M2540D/M2541D)			*A-1632-229-A	A BOARD, COMPLETE (IV-M2541K)	
	*1-590-460-11	CORD, POWER (WITH CONNECTOR)			*A-1632-241-A	A BOARD, COMPLETE (IV-M2541L)	
		(KV-M2540B/M2540E/M2541E/M2540K/M2541K)			*A-1632-211-A	A BOARD, COMPLETE (IV-M2541U)	
	*1-590-762-11	CORD, POWER (WITH PLUG)		12	1-693-185-11	TUNER (UV916H) (KV-M2541A/M2540B/ M2540D/M2541D/M2540E/M2541E/ M2541L/M2540K/M2541K)	
		(KV-M2541U/M2541L)			1-693-184-11	TUNER (U944C) (KV-M2541U)	
9	*A-1642-121-A	D BOARD, COMPLETE (KV-M2541A/M2540B/ M2540D/M2541D/M2540E/M2541E/ M2540K/M2541K)		13	4-202-835-01	COVER, REAR	
	*A-1642-134-A	D BOARD, COMPLETE (KV-M2541L/M2541U)		14	4-039-358-01	SCREW (4x16), (+) B TAPPING	

## 6-2. PICTURE TUBE



The components identified by shading and marked  $\Delta$  are critical for safety. Replace only with the part number specified.

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
51	X-4200-172-2	BEZNET ASSY	52-58	62	*A-1638-052-A	C BOARD, COMPLETE (KV-M2541A/M2540B/M2540D/M2541D/ M2540E/M2541E/M2540K/M2541K)	
52	4-202-833-01	FRAME, SPEAKER			*A-1638-045-A	C BOARD, COMPLETE (KV-M2541L/M2541U)	
53	4-392-036-01	CATCHER, PUSH		63	4-303-774-11	SPRING, GROUND WIRE	
54	4-202-831-01	DOOR		64	$\Delta$ 1-402-746-11	COIL, DEGAUSSING	
55	4-202-830-01	LID		65	4-385-916-01	HOLDER (D)	
56	4-202-834-01	BUTTON, POWER		66	4-036-188-01	SCREW (M), PT	
57	4-329-112-00	SPRING		67	4-308-870-00	CLIP LEAD WIRE	
58	4-202-832-21	WINDOW, ORNAMENTAL (KV-M2541A)		68	1-452-032-00	MAGNET, DISK; 10MMØ	
	4-202-832-01	WINDOW, ORNAMENTAL (KV-M2540B/M2540D/M2540E/M2540K)		69	1-452-094-00	MAGNET, ROTATABLE DISK; 15MMØ	
	4-202-832-11	WINDOW, ORNAMENTAL (KV-M2541D/M2541E/M2541K/M2541L/M2541U)		70	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
59	$\Delta$ 8-733-231-05	CRT SD-178 (A59JWC61X)		71	3-701-007-00	BAND, BINDING	
60	3-704-495-01	SPACER, DY					
61	$\Delta$ 8-451-311-34	DEFLECTION YOLK (Y25FXA)					



## ELECTRICAL PARTS LIST

## SECTION 7

The components identified by shading and marked  $\Delta$  are critical for safety.  
Replace only with the part number specified.

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

## CAPACITORS

## COILS

MF : mF, PF : mmF

MMH : mH,  $\mu$ H : mH

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

## RESISTORS

- All resistors are in ohms
- F : nonflammable

F1

A

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-652-271-11	F1 BOARD *****		C12	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	< CONNECTOR >			C13	1-126-101-11	ELECT 100MF	20% 16V
CN603	$\Delta$ 1-580-844-11	PIN, CONNECTOR (POWER)		C15	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
CN604	$\Delta$ 1-695-292-11	PIN, CONNECTOR (POWER)			(KV-M2541A/M2540B/M2540D/M2541D/M2541L/M2541U)		
	< FUSE >			C16	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
F601	$\Delta$ 1-576-232-21	FUSE (B.B.C.) 5A 250V		C17	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	$\Delta$ 1-533-230-11	HOLDER, FUSE (F601)					
	< SWITCH >			C18	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
S601	$\Delta$ 1-571-433-11	SWITCH, PUSH (AC POWER)		C19	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
*****				C21	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
	*A-1632-239-A	A BOARD, COMPLETE (KV-M2541A) *****		C22	1-164-005-11	CERAMIC CHIP 0.47MF	25V
	*A-1632-240-A	A BOARD, COMPLETE (KV-M2540B) *****		C23	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
	*A-1632-236-A	A BOARD, COMPLETE (KV-M2540D) *****					
	*A-1632-235-A	A BOARD, COMPLETE (KV-M2541D) *****		C24	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
	*A-1632-226-A	A BOARD, COMPLETE (KV-M2540E) *****		C30	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	*A-1632-202-A	A BOARD, COMPLETE (KV-M2541E) *****		C101	1-124-916-11	ELECT 22MF	20% 50V
	*A-1632-230-A	A BOARD, COMPLETE (KV-M2540K) *****			(KV-M2541A/M2540D/M2541D/M2540E/M2541E/M2540F/ M2541K/M2541L/M2541U)		
	*A-1632-229-A	A BOARD, COMPLETE (KV-M2541K) *****		1-124-927-11	ELECT 4.7MF	20% 50V	(KV-M2540B)
	*A-1632-241-A	A BOARD, COMPLETE (KV-M2541L) *****		C102	1-124-917-11	ELECT 33MF	20% 50V
	*A-1632-211-A	A BOARD, COMPLETE (KV-M2541U) *****		C103	1-124-917-11	ELECT 33MF	20% 50V
TP1	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P		C104	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
	< CAPACITOR >			C105	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C1	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C106	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C2	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V				
C3	1-124-907-11	ELECT 10MF	20% 50V	C107	1-164-346-11	CERAMIC CHIP 1MF	16V
C4	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C108	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C7	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C109	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C112	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C8	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C113	1-124-477-11	ELECT 47MF	20% 16V
C9	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V				
C10	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C114	1-164-346-11	CERAMIC CHIP 1MF	16V
C11	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C115	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
				C117	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C118	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
				C119	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
				C120	1-164-337-11	CERAMIC CHIP 2.2MF	16V
				C122	1-124-477-11	ELECT 47MF	20% 16V
				C123	1-163-090-00	CERAMIC CHIP 7PF	0.25 PF 50V
				C124	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C125	1-164-337-11	CERAMIC CHIP 2.2MF	16V
				C126	1-164-337-11	CERAMIC CHIP 2.2MF	16V
				C127	1-124-917-11	ELECT 33MF	20% 50V
				C128	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C129	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
				C130	1-216-295-91	METAL GLAZE 0	5% 1/10W
				C131	1-124-477-11	ELECT 47MF	20% 16V
				C134	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V

A

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C135	1-126-176-11	ELECT 220MF	20% 10V	C327	1-136-165-00	FILM 0.1MF	5% 50V
C139	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C328	1-164-337-11	CERAMIC CHIP 2.2MF	16V
C142	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C329	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C143	1-126-101-11	ELECT 100MF	16V	C330	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C144	1-164-346-11	CERAMIC CHIP 1MF	16V	C331	1-165-320-11	CERAMIC CHIP 0.47MF	10% 16V
C152	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C332	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C154	1-163-123-00	CERAMIC CHIP 180PF	5% 50V	C333	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
	(KV-M2541A/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K)			C334	1-163-016-00	CERAMIC CHIP 0.0039MF	10% 50V
	1-163-105-00	CERAMIC CHIP 33PF	5% 50V	C335	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	1-163-109-00	CERAMIC CHIP 47PF	5% 50V	C336	1-126-101-11	ELECT 100MF	20% 16V
		(KV-M2541L/M2541U)		C337	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
C157	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C338	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	C339	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
	(KV-M2541A/M2540D/M2540E/M2541E/M2540K/M2541K)			C342	1-124-907-11	ELECT 10MF	20% 50V
	1-163-117-00	CERAMIC CHIP 100PF	5% 50V	C346	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
		(KV-M2541L/M2541U)		C347	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C160	1-163-125-00	CERAMIC CHIP 220PF	5% 50V		(KV-M2541A/M2540B/M2540D/M2541D/M2541L/M2541U)		
C163	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V		1-163-093-00	CERAMIC CHIP 10PF	5% 50V
		(KV-M2540B)			(KV-M2540E/M2541E/M2540K/M2541K)		
C164	1-163-119-00	CERAMIC CHIP 120PF	5% 50V	C348	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C201	1-164-005-11	CERAMIC CHIP 0.47MF	25V		(KV-M2541A/M2540B/M2540D/M2541D/M2541L/M2541U)		
C203	1-124-907-11	ELECT 10MF	20% 50V		1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C210	1-164-005-11	CERAMIC CHIP 0.47MF	25V		(KV-M2540E/M2541E/M2540K/M2541K)		
C211	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C349	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C212	1-164-005-11	CERAMIC CHIP 0.47MF	25V		(KV-M2541A/M2540B/M2540D/M2541D/M2541L/M2541U)		
C215	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V		1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C216	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V		(KV-M2540E/M2541E/M2540K/M2541K)		
C219	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V	C350	1-165-320-11	CERAMIC CHIP 0.47MF	10% 16V
C220	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V	C351	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C221	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C352	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C222	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V	C353	1-124-477-11	ELECT 47MF	20% 16V
C225	1-130-489-00	FILM 0.033MF	5% 50V	C355	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C227	1-163-020-00	CERAMIC CHIP 0.0082MF	10% 50V		(KV-M2541A/M2540B/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K)		
C228	1-163-020-00	CERAMIC CHIP 0.0082MF	10% 50V		1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C301	1-163-113-00	CERAMIC CHIP 470PF	5% 50V		(KV-M2541L/M2541U)		
C305	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C359	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C306	1-126-101-11	ELECT 100MF	20% 16V	C361	1-124-907-11	ELECT 10MF	20% 50V
C307	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C362	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C308	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C363	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C309	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V		(KV-M2541A/M2540B/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K)		
C310	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C382	1-124-907-11	ELECT 10MF	20% 50V
C311	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C383	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C312	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C406	1-124-907-11	ELECT 10MF	20% 50V
C313	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C407	1-164-346-11	CERAMIC CHIP 1MF	16V
C314	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C409	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C315	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C410	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C316	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C411	1-124-477-11	ELECT 47MF	20% 16V
C318	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C418	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C320	1-124-477-11	ELECT 47MF	20% 16V	C420	1-216-295-91	METAL GLAZE 0	5% 1/10W
C321	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C421	1-124-917-11	ELECT 33MF	5% 50V
C322	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C422	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C323	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C423	1-124-477-11	ELECT 47MF	20% 16V
C324	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C425	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C325	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	C426	1-164-346-11	CERAMIC CHIP 1MF	16V
C326	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	C427	1-124-477-11	ELECT 47MF	20% 16V
				C428	1-164-346-11	CERAMIC CHIP 1MF	16V
				C430	1-124-477-11	ELECT 47MF	20% 16V
				C431	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
				C433	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
				C435	1-126-101-11	ELECT 100MF	20% 16V



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C445	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D102	8-719-914-43	DIODE DAN202K (KV-M2540B)	
< C1002 - C1033 >				D103	8-719-914-43	DIODE DAN202K (KV-M2540B/M2540D/ M2541D/M2540K/M2541K)	
(KV-M2541A/M2541D/M2541E/M2541K/M2541L/M2541U)				D301	8-719-041-97	DIODE MA113-TX	
C1002	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D302	8-719-041-97	DIODE MA113-TX	
C1003	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D303	8-719-041-97	DIODE MA113-TX	
C1004	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	D304	8-719-041-97	DIODE MA113-TX	
C1005	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	D305	8-719-041-97	DIODE MA113-TX	
C1007	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	D314	8-719-047-16	DIODE BAS216	
C1008	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	D315	8-719-041-97	DIODE MA113-TX	
C1009	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	D380	1-216-295-91	METAL GLAZE 0 5% 1/10W	
C1011	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D401	8-719-047-41	DIODE UMZ12N-T146	
C1013	1-164-346-11	CERAMIC CHIP 1MF	16V	D404	8-719-047-41	DIODE UMZ12N-T146	
(KV-M2541A/M2541D/M2541L/M2541U)				D405	8-719-047-41	DIODE UMZ12N-T146	
C1015	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	D406	8-719-047-41	DIODE UMZ12N-T146	
C1016	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	D407	8-719-047-41	DIODE UMZ12N-T146	
C1018	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D408	8-719-047-41	DIODE UMZ12N-T146	
C1019	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D409	8-719-047-41	DIODE UMZ12N-T146	
C1020	1-124-916-11	ELECT 22MF	20% 50V	D410	8-719-047-41	DIODE UMZ12N-T146	
C1021	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	D411	8-719-047-41	DIODE UMZ12N-T146	
C1024	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	D1002	8-719-914-43	DIODE DAN202K	
C1025	1-124-477-11	ELECT 47MF	20% 16V	< IC >			
C1026	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	IC001	8-752-855-70	IC CXP85232-111Q-TL	
C1027	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	(KV-M2540B/M2541D)			
C1028	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	8-752-855-69 IC CXP85232-109Q-TL			
C1029	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	(KV-M2541A/M2540D/M2541K)			
C1030	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	8-752-854-74 IC CXP85232-110Q-TL			
C1031	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	(KV-M2540E/M2540K)			
C1032	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	8-752-851-53 IC CXP85232-107Q-TL			
C1033	1-124-907-11	ELECT 10MF	20% 50V	(KV-M2541E)			
< CERAMIC FILTER >				IC002	8-759-277-89	IC ST24C16CM1-TR/A	
CF101	1-760-154-21	TRAP, CERAMIC		IC003	8-759-041-54	IC MN1382S	
(KV-M2540B/M2540D/M2541D/M2540E/M2541E/M2540K/ M2541K)				IC004	8-759-041-54	IC MN1382S	
CF102	1-404-134-00	TRAP, CERAMIC (5.5MHZ)		IC101	8-759-277-66	IC TDA9814T-V2	
(KV-M2541A/M2540D/M2541D/M2540E/M2541E/M2540K/ M2541K)				IC201	8-759-252-12	IC TDA6622-5X-GEG	
1-409-430-11 TRAP, CERAMIC (6.5MHZ) (KV-M2540B)				IC202	8-759-514-57	IC BA7046F	
1-409-333-00 TRAP, CERAMIC (6.0MHZ)				IC301	8-759-251-57	IC TDA8366T	
(KV-M2541L/M2541U)				IC302	8-759-086-97	IC TDA4661T/V2	
CF103	1-760-106-21	FILTER, CERAMIC		IC303	8-759-251-56	IC TDA8395T	
(KV-M2541A/M2540B/M2540D/M2541D/M2540E/M2541E/ M2540K/M2541K)				(KV-M2540B/M2540D/M2541D/M2540K/M2541K)			
CF104	1-567-100-00	FILTER, CERAMIC (KV-M2540B/M2541L/ M2541U)		IC401	8-752-069-53	IC CXA1855Q-T6	
CF109	1-760-154-21	TRAP, CERAMIC (KV-M2541A/M2540B/ M2540D/M2541D)		< IC1001 - IC1003 >			
< CONNECTOR >				(KV-M2541A/M2541D/M2541E/M2541K/M2541L/M2541U)			
CN001	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P		IC1001	8-759-252-08	IC CF72306DW-R	
CN002	*1-568-882-51	PIN, CONNECTOR 7P		IC1002	8-759-275-29	IC CF70205AFN-R	
CN003	*1-568-879-11	PIN, CONNECTOR 4P		IC1003	8-759-300-71	IC HD14053BFP	
< DIODE >				< COIL >			
D6	8-719-047-41	DIODE UMZ12N-T146		L1	1-412-010-41	INDUCTOR CHIP 22UH	
D7	8-719-041-97	DIODE MA113-TX		L101	1-408-609-41	INDUCTOR 33UH	
D9	8-719-041-97	DIODE MA113-TX		L102	1-410-214-31	INDUCTOR CHIP 68UH	
D11	8-719-041-97	DIODE MA113-TX		L103	1-408-419-00	INDUCTOR 68UH	
D12	8-719-049-64	DIODE MA715-TX (KV-M2540B/M2541E)		L104	1-414-170-11	INDUCTOR CHIP 100UH	
D101	8-719-018-12	DIODE MA8330		(KV-M2540B)			
				L105	1-408-411-00	INDUCTOR 15UH	
				(KV-M2541A/M2540D/M2541D/M2540E/M2541E/M2540K/ M2541K/M2541L/M2541U)			
				1-408-406-00 INDUCTOR 5.6UH			
				(KV-M2540B)			

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L107	1-410-985-11	INDUCTOR CHIP 0.22UH		Q314	8-729-900-53	TRANSISTOR DTC114EK	
L108	1-408-409-00	INDUCTOR 10UH		Q380	8-729-920-74	TRANSISTOR 2SC2412K-QR	
	(KV-M2541A/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K/M2541L/M2541U)			Q381	8-729-920-74	TRANSISTOR 2SC2412K-QR	
	1-408-414-00	INDUCTOR 27UH		Q401	8-729-920-74	TRANSISTOR 2SC2412K-QR	
		(KV-M2540B)		Q402	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L109	1-412-010-41	INDUCTOR CHIP 22UH		Q403	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L110	1-412-004-31	INDUCTOR CHIP 6.8UH		Q404	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L111	1-414-170-11	INDUCTOR CHIP 100UH		Q406	8-729-216-22	TRANSISTOR 2SA1162-G	
L304	1-412-006-31	INDUCTOR CHIP 10UH		Q407	8-729-923-89	TRANSISTOR DTC123EK-T147	
L305	1-412-006-31	INDUCTOR CHIP 10UH		Q408	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L306	1-412-006-31	INDUCTOR CHIP 10UH		Q1001	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L307	1-408-609-41	INDUCTOR 33UH		< RESISTOR >			
L308	1-408-424-00	INDUCTOR 180UH		JR3	1-216-296-91	METAL GLAZE 0 5% 1/8W	
L309	1-408-424-00	INDUCTOR 180UH		JR8	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L310	1-408-407-00	INDUCTOR 6.8UH		JR9	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L401	1-410-214-31	INDUCTOR CHIP 68UH		JR10	1-216-295-91	METAL GLAZE 0 5% 1/10W	
	< L1001 - L1003 >			JR12	1-216-295-91	METAL GLAZE 0 5% 1/10W	
	(KV-M2541A/M2541D/M2541E/M2541K/M2541L/M2541U)			JR13	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L1001	1-408-419-00	INDUCTOR 68UH		JR14	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L1002	1-408-419-00	INDUCTOR 68UH		JR15	1-216-295-91	METAL GLAZE 0 5% 1/10W	
L1003	1-410-999-11	INDUCTOR CHIP 3.3UH		JR16	1-216-295-91	METAL GLAZE 0 5% 1/10W	
	< COIL >			JR17	1-216-295-91	METAL GLAZE 0 5% 1/10W	
T101	1-403-686-11	COIL		JR18	1-216-295-91	METAL GLAZE 0 5% 1/10W	
	< TRANSISTOR >			JR19	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q4	8-729-901-01	TRANSISTOR DTC144EK		JR28	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q8	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR51	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q11	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR52	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q12	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR55	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q13	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR56	1-216-296-91	METAL GLAZE 0 5% 1/8W	
		(KV-M2541A/M2540B)		JR57	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q14	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR58	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q102	8-729-104-80	TRANSISTOR 2SC3355		JR59	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q103	8-729-900-53	TRANSISTOR DTC114EK		JR60	1-216-296-91	METAL GLAZE 0 5% 1/8W	
		(KV-M2540B)		JR61	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q104	8-729-900-53	TRANSISTOR DTC114EK		JR62	1-216-296-91	METAL GLAZE 0 5% 1/8W	
		(KV-M2540B)		JR63	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q105	8-729-900-53	TRANSISTOR DTC114EK		JR64	1-216-296-91	METAL GLAZE 0 5% 1/8W	
		(KV-M2540B)		JR65	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q107	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR69	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q108	8-729-907-26	TRANSISTOR IMX1		JR70	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q116	8-729-901-01	TRANSISTOR DTC144EK-T147		JR71	1-216-296-91	METAL GLAZE 0 5% 1/8W	
		(KV-M2540B/M2540D/M2541D/M2540K/M2541K)		JR113	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q117	8-729-901-01	TRANSISTOR DTC144EK-T147		JR120	1-216-295-91	METAL GLAZE 0 5% 1/10W	
		(KV-M2540B/M2540D/M2541D/M2540K/M2541K)		JR122	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q120	8-729-216-22	TRANSISTOR 2SA1162-G				(KV-M2541A/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K/M2541L/M2541U)	
Q121	8-729-216-22	TRANSISTOR 2SA1162-G		JR123	1-216-295-91	METAL GLAZE 0 5% 1/10W	
		(KV-M2540B)				(KV-M2541A/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K/M2541L/M2541U)	
Q123	8-729-901-01	TRANSISTOR DTC144EK		JR125	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q125	8-729-900-53	TRANSISTOR DTC114EK				(KV-M2541A/M2540E/M2541E)	
		(KV-M2540B)		JR126	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q131	8-729-216-22	TRANSISTOR 2SA1162-G		JR127	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q132	8-729-920-74	TRANSISTOR 2SC2412K-QR				(KV-M2541L/M2541U)	
Q133	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR201	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q134	8-729-900-53	TRANSISTOR DTC114EK		JR401	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q304	8-729-920-74	TRANSISTOR 2SC2412K-QR				(KV-M2540B/M2540D/M2540E/M2540K)	
Q312	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR402	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q313	8-729-920-74	TRANSISTOR 2SC2412K-QR				(KV-M2540B/M2540D/M2540E/M2540K)	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
JR403	1-216-295-91	METAL GLAZE 0 5% 1/10W (KV-M2540B/M2540D/M2540E/M2540K)	
JR404	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR405	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR406	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR407	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR1004	1-216-295-91	METAL GLAZE 0 5% 1/10W	
R1	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-M2540B)	
R6	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R16	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-M2540B)	
R21	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R24	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R25	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R26	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R27	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R29	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R31	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R33	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R35	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R44	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R46	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R47	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R49	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R50	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R54	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R59	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R60	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R61	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R66	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R70	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R71	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R72	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R73	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R75	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R76	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R77	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R78	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R79	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R82	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R83	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R84	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R85	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R86	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R87	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R88	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R89	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R90	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R91	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R92	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R93	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R94	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R95	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R96	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R97	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R99	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R101	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R103	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R104	1-216-073-00	METAL GLAZE 10K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R105	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R106	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R107	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R108	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R109	1-216-180-00	METAL GLAZE 180 5% 1/8W	
R110	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R111	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R112	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R113	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R114	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R115	1-218-755-11	METAL CHIP 130K 0.50% 1/10W	
R116	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R117	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R118	1-216-107-00	METAL GLAZE 270K 5% 1/10W	
R119	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R121	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R122	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R123	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R124	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R125	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R126	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R127	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R130	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R131	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R134	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W (KV-M2540B/M2540D/M2541D/M2540K/M2541K)	
R135	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W (KV-M2540B/M2540D/M2541D/M2540K/M2541K)	
R136	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R139	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R140	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R143	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W (KV-M2540B/M2540D/M2541D/M2540K/M2541K)	
R144	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R146	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R147	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-M2541A/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K)	
	1-216-031-00	METAL GLAZE 180 5% 1/10W (KV-M2540B)	
	1-216-037-00	METAL GLAZE 330 5% 1/10W (KV-M2541L/M2541U)	
R150	1-216-295-91	METAL GLAZE 0 5% 1/10W (KV-M2541A/M2540B/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K)	
	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W (KV-M2541L/M2541U)	
R151	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R152	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R160	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R161	1-216-031-00	METAL GLAZE 180 5% 1/10W (KV-M2541A/M2540B/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K)	
	1-216-047-00	METAL GLAZE 820 5% 1/10W (KV-M2541L/M2541U)	
R162	1-216-017-00	METAL GLAZE 47 5% 1/10W	
R163	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R164	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R165	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R166	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R170	1-216-073-00	METAL GLAZE 10K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R171	1-216-035-00	METAL GLAZE 270 5%	1/10W	R352	1-216-123-11	METAL GLAZE 1.2M 5%	1/10W
R172	1-216-295-91	METAL GLAZE 0 5%	1/10W	R354	1-216-025-00	METAL GLAZE 100 5%	1/10W
R173	1-216-035-00	METAL GLAZE 270 5%	1/10W	R355	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R174	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	R356	1-216-025-00	METAL GLAZE 100 5%	1/10W
R180	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R364	1-216-041-00	METAL GLAZE 470 5%	1/10W
R182	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R365	1-216-025-00	METAL GLAZE 100 5%	1/10W
R183	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W		(KV-M2541A/M2540B/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K)		
R185	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W		1-216-027-00	METAL GLAZE 120 5%	1/10W
R186	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W			(KV-M2541L/M2541U)	
R193	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R370	1-216-033-00	METAL GLAZE 220 5%	1/10W
		(KV-M2540B)		R371	1-216-033-00	METAL GLAZE 220 5%	1/10W
R194	1-216-180-00	METAL GLAZE 180 5%	1/8W	R372	1-216-033-00	METAL GLAZE 220 5%	1/10W
R195	1-216-113-00	METAL GLAZE 470K 5%	1/10W	R373	1-216-041-00	METAL GLAZE 470 5%	1/10W
R196	1-216-017-00	METAL GLAZE 47 5%	1/10W	R380	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R199	1-216-037-00	METAL GLAZE 330 5%	1/10W	R381	1-216-025-00	METAL GLAZE 100 5%	1/10W
	(KV-M2541A/M2540D/M2541D/M2540E/M2541E/M2540K/M2541K)			R382	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W	R383	1-216-049-00	METAL GLAZE 1K 5%	1/10W
		(KV-M2540B)		R384	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R385	1-216-049-00	METAL GLAZE 1K 5%	1/10W
		(KV-M2541L/M2541U)		R386	1-216-041-00	METAL GLAZE 470 5%	1/10W
R200	1-216-047-00	METAL GLAZE 820 5%	1/10W	R387	1-216-041-00	METAL GLAZE 470 5%	1/10W
R201	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W	R388	1-216-041-00	METAL GLAZE 470 5%	1/10W
R204	1-216-025-00	METAL GLAZE 100 5%	1/10W	R389	1-216-041-00	METAL GLAZE 470 5%	1/10W
R205	1-216-025-00	METAL GLAZE 100 5%	1/10W	R390	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R206	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R392	1-216-091-00	METAL GLAZE 56K 5%	1/10W
R207	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R393	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R210	1-216-025-00	METAL GLAZE 100 5%	1/10W	R407	1-216-198-91	METAL GLAZE 1K 5%	1/8W
R211	1-216-025-00	METAL GLAZE 100 5%	1/10W	R408	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R216	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R409	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R217	1-216-031-00	METAL GLAZE 180 5%	1/10W	R410	1-216-025-00	METAL GLAZE 100 5%	1/10W
R220	1-216-174-00	METAL GLAZE 100 5%	1/8W	R413	1-216-033-00	METAL GLAZE 220 5%	1/10W
R305	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R415	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
		(KV-M2541L/M2541U)		R417	1-216-033-00	METAL GLAZE 220 5%	1/10W
R308	1-216-025-00	METAL GLAZE 100 5%	1/10W	R419	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R309	1-216-025-00	METAL GLAZE 100 5%	1/10W	R420	1-216-033-00	METAL GLAZE 220 5%	1/10W
R311	1-216-025-00	METAL GLAZE 100 5%	1/10W	R421	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R313	1-216-025-00	METAL GLAZE 100 5%	1/10W	R422	1-216-022-00	METAL GLAZE 75 5%	1/10W
R315	1-216-025-00	METAL GLAZE 100 5%	1/10W	R423	1-216-093-00	METAL GLAZE 68K 5%	1/10W
R316	1-216-025-00	METAL GLAZE 100 5%	1/10W	R424	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R317	1-216-025-00	METAL GLAZE 100 5%	1/10W	R425	1-216-022-00	METAL GLAZE 75 5%	1/10W
R318	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R426	1-216-025-00	METAL GLAZE 100 5%	1/10W
R319	1-216-025-00	METAL GLAZE 100 5%	1/10W	R427	1-216-188-00	METAL GLAZE 390 5%	1/8W
R320	1-216-025-00	METAL GLAZE 100 5%	1/10W	R429	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R321	1-216-025-00	METAL GLAZE 100 5%	1/10W	R430	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R322	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W	R431	1-216-188-00	METAL GLAZE 390 5%	1/8W
R323	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R432	1-216-039-00	METAL GLAZE 390 5%	1/10W
R325	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R433	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R326	1-216-077-00	METAL GLAZE 15K 5%	1/10W	R435	1-216-039-00	METAL GLAZE 390 5%	1/10W
R327	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R437	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R328	1-216-025-00	METAL GLAZE 100 5%	1/10W	R438	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R329	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W	R439	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
R330	1-216-033-00	METAL GLAZE 220 5%	1/10W	R446	1-216-025-00	METAL GLAZE 100 5%	1/10W
R331	1-216-033-00	METAL GLAZE 220 5%	1/10W	R447	1-216-025-00	METAL GLAZE 100 5%	1/10W
R332	1-216-033-00	METAL GLAZE 220 5%	1/10W	R454	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R333	1-216-689-11	METAL CHIP 39K 0.50%	1/10W	R458	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R340	1-216-097-00	METAL GLAZE 100K 5%	1/10W	R464	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R341	1-216-083-00	METAL GLAZE 27K 5%	1/10W	R465	1-216-025-00	METAL GLAZE 100 5%	1/10W
R342	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R473	1-216-022-00	METAL GLAZE 75 5%	1/10W
R351	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W	R474	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	(KV-M2541A/M2540B/M2540D/M2541D/M2541L/M2541U)						

The components identified by shading and marked **A** are critical for safety.  
Replace only with the part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK
R477	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W (KV-M2541L/M2541U)	
R482	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R483	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W (KV-M2541A/M2540B/M2540D/M2541D/M2540E/M2541E/ M2540K/M2541K)	
	1-216-047-00	METAL GLAZE 820 5% 1/10W (KV-M2541L/M2541U)	
R484	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R485	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R486	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R487	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R488	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R489	1-216-022-00	METAL GLAZE 75 5% 1/10W	
< R1001 - R1029 > (KV-M2541A/M2541D/M2541E/M2541K/M2541L/M2541U)			
R1001	1-216-295-91	METAL GLAZE 0 5% 1/10W	
R1002	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1004	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1005	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1008	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R1009	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1010	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R1011	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R1012	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R1014	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1015	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1016	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1025	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1026	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1027	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1029	1-216-025-00	METAL GLAZE 100 5% 1/10W	
< VARIABLE RESISTOR >			
RV102	1-241-765-11	RES, ADJ, CARBON 22K (KV-M2540B)	
< RESISTOR NETWORK >			
RA1	1-236-908-11	RESISTOR, NETWORK (CHIP TYPE)	
RA2	1-236-908-11	RESISTOR, NETWORK (CHIP TYPE)	
RA3	1-236-908-11	RESISTOR, NETWORK (CHIP TYPE)	
RA7	1-236-908-11	RESISTOR, NETWORK (CHIP TYPE)	
RA8	1-239-412-11	NETWORK, RESISTOR (CHIP TYPE)	
RA9	1-239-412-11	NETWORK, RESISTOR (CHIP TYPE)	
RA10	1-236-908-11	RESISTOR, NETWORK (CHIP TYPE)	
RA11	1-236-904-11	RESISTOR, NETWORK (CHIP TYPE)	
< FILTER >			
SWF101	1-579-273-11	FILTER, SURFACE WAVE (KV-M2541A/M2540B/M2540D/M2541D/M2540E/M2541E/ M2540K/M2541K/M2541L)	
SWF102	1-760-330-11	FILTER, SURFACE WAVE (KV-M2541U)	
	1-760-329-11	FILTER, SURFACE WAVE (KV-M2541A/M2540D/M2541D/M2540E/M2541E/M2540K/ M2541K/M2541L/M2541U)	
	1-760-244-11	FILTER, SURFACE WAVE (KV-M2540B)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
< TUNER >			
TU101	1-693-185-11	TUNER (UV916H) (KV-M2541A/M2540B/ M2540D/M2541D/M2540E/M2541E/ M2540K/M2541K/M2541L)	
	1-693-184-11	TUNER (U944C) (KV-M2541U)	
< CRYSTAL >			
X2	1-579-063-21	VIBRATOR, CERAMIC	
X301	1-760-331-11	VIBRATOR, CRYSTAL	
X1001	1-567-495-11	OSCILLATOR, CRYSTAL (KV-M2541A/M2541D/M2541E/M2541K/M2541L/M2541U)	
*****			
*A-1638-052-A C BOARD, COMPLETE *****			
< CAPACITOR >			
C702	1-102-824-00	CERAMIC 470PF 5% 50V	
C703	1-102-115-00	CERAMIC 560PF 10% 50V	
C704	1-102-117-00	CERAMIC 820PF 10% 50V	
C706	1-102-113-00	CERAMIC 390PF 10% 50V	
C706	1-102-822-00	CERAMIC 390PF 5% 50V	
C707	1-162-116-00	CERAMIC 680PF 10% 2KV	
C708	1-162-114-00	CERAMIC 0.0047MF 2KV	
C709	1-102-114-00	CERAMIC 470PF 10% 50V	
C710	1-123-947-00	ELECT 10MF 20% 250V	
C712	1-102-115-00	CERAMIC 560PF 10% 50V	
C714	1-124-360-00	ELECT 1000MF 20% 16V	
C717	1-102-114-00	CERAMIC 470PF 10% 50V	
C718	1-102-114-00	CERAMIC 470PF 10% 50V	
C719	1-102-114-00	CERAMIC 470PF 10% 50V	
< CONNECTOR >			
CN701	1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
CN703	*1-568-882-51	PIN, CONNECTOR 7P	
CN705	1-695-915-11	TAB (CONTACT)	
< DIODE >			
D701	8-719-110-14	DIODE RD9.1ESB3	
D702	8-719-901-33	DIODE 1SS133	
D703	8-719-901-33	DIODE 1SS133	
D704	8-719-901-33	DIODE 1SS133	
D705	8-719-901-33	DIODE 1SS133	
D706	8-719-901-33	DIODE 1SS133	
D707	8-719-901-33	DIODE 1SS133	
D708	8-719-901-33	DIODE 1SS133	
D709	8-719-901-33	DIODE 1SS133	
D710	8-719-901-33	DIODE 1SS133	
D711	8-719-302-43	DIODE EL1Z	
D713	8-719-901-33	DIODE 1SS133	
< CRT SOCKET >			
J701	* 1-526-990-11	SOCKET, CRT	
< COIL >			
L704	1-408-609-41	INDUCTOR 33UH	
< TRANSISTOR >			
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	

The components identified by shading and marked **A** are critical for safety.  
Replace only with the part number specified.

**C****D**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q703	8-729-906-70	TRANSISTOR BF871		C514	1-136-165-00	FILM 0.1MF 5% 50V	
Q704	8-729-200-17	TRANSISTOR 2SA1091-0		C515	1-124-480-11	ELECT 470MF 20% 25V	
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE		C517	1-124-480-11	ELECT 470MF 20% 25V	
Q706	8-729-906-70	TRANSISTOR BF871		C518	1-102-228-00	CERAMIC 470PF 10% 500V	
Q707	8-729-200-17	TRANSISTOR 2SA1091-0		C519	1-102-228-00	CERAMIC 470PF 10% 500V	
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE		C520	1-124-480-11	ELECT 470MF 20% 25V	
Q709	8-729-906-70	TRANSISTOR BF871		C521	1-124-006-11	ELECT 10MF 20% 25V	
Q710	8-729-200-17	TRANSISTOR 2SA1091-0		C522	1-124-907-11	ELECT 10MF 20% 50V	
< RESISTOR >				C523	1-136-165-00	FILM 0.1MF 5% 50V	
R704	1-216-486-00	METAL OXIDE 8.2K 5% 3W F		C600	<b>A</b> 1-161-742-00	CERAMIC 0.0022MF 20% 400V	
R705	1-202-822-00	SOLID 2.2K 10% 1/2W		C601	<b>A</b> 1-162-599-12	CERAMIC 0.0047MF 250V	
R706	1-249-409-11	CARBON 220 5% 1/4W		C602	<b>A</b> 1-162-599-12	CERAMIC 0.0047MF 250V	
R707	1-249-408-11	CARBON 180 5% 1/4W		C603	1-125-318-00	ELECT (BLOCK) 220MF 20% 400V	
R709	1-202-844-00	SOLID 330K 10% 1/2W		C604	1-124-122-11	ELECT 100MF 20% 50V	
R711	1-249-423-11	CARBON 3.3K 5% 1/4W		C605	1-124-667-11	ELECT 10MF 20% 100V	
R712	1-202-822-00	SOLID 2.2K 10% 1/2W		C606	1-162-318-11	CERAMIC 0.001MF 10% 500V	
R713	1-215-493-00	METAL 1M 1% 1/4W		C607	1-124-120-11	ELECT 220MF 20% 25V	
R714	1-216-486-00	METAL OXIDE 8.2K 5% 3W F		C608	1-109-880-11	FILM 0.0015MF 3% 2KV	
R715	1-249-417-11	CARBON 1K 5% 1/4W		C611	1-102-228-00	CERAMIC 470PF 10% 500V	
R716	1-249-409-11	CARBON 220 5% 1/4W		C612	1-104-799-11	ELECT 22MF 20% 100V	
R717	1-249-408-11	CARBON 180 5% 1/4W		C613	1-124-347-00	ELECT 100MF 20% 160V	
R718	1-202-814-11	SOLID 33K 10% 1/2W		C614	1-126-804-11	ELECT 100MF 20% 25V	
R720	1-249-423-11	CARBON 3.3K 5% 1/4W		C615	1-126-376-11	ELECT 470MF 20% 25V	
R722	1-202-848-00	SOLID 680K 10% 1/2W		C616	1-128-386-11	ELECT 1000MF 20% 25V	
R723	1-249-417-11	CARBON 1K 5% 1/4W		C617	1-126-183-11	ELECT 1000MF 20% 16V	
R724	1-202-846-00	SOLID 470K 10% 1/2W		C618	1-136-165-00	FILM 0.1MF 5% 50V	
R726	1-202-822-00	SOLID 2.2K 10% 1/2W		C619	1-102-228-00	CERAMIC 470PF 10% 500V	
R727	1-249-409-11	CARBON 220 5% 1/4W		C620	1-102-228-00	CERAMIC 470PF 10% 500V	
R728	1-216-350-11	METAL OXIDE 1.2 5% 1W F		C621	1-136-165-00	FILM 0.1MF 5% 50V	
R729	1-249-408-11	CARBON 180 5% 1/4W		C622	1-104-797-11	ELECT 0.47MF 20% 100V	
R731	1-249-423-11	CARBON 3.3K 5% 1/4W		C623	1-124-120-11	ELECT 220MF 20% 25V	
R732	1-215-479-00	METAL 270K 1% 1/4W		C624	1-136-165-00	FILM 0.1MF 5% 50V	
R734	1-247-807-31	CARBON 100 5% 1/4W		C625	1-124-910-11	ELECT 47MF 20% 50V	
R736	1-216-486-00	METAL OXIDE 8.2K 5% 3W F		C626	1-124-120-11	ELECT 220MF 20% 25V	
R737	1-215-489-00	METAL 680K 1% 1/4W		C627	1-124-120-11	ELECT 220MF 20% 25V	
R739	1-249-417-11	CARBON 1K 5% 1/4W		C628	1-124-907-11	ELECT 10MF 20% 50V	
R741	1-202-549-00	SOLID 100 20% 1/2W		C629	1-126-800-51	ELECT 2200MF 20% 35V	
R743	1-202-842-11	SOLID 220K 10% 1/2W		C630	1-126-800-51	ELECT 2200MF 20% 35V	
< VARIABLE RESISTOR >				C631	1-124-916-11	ELECT 22MF 20% 50V	
RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M		C632	1-124-120-11	ELECT 220MF 20% 25V	
RV702	1-241-656-11	RES, ADJ, METAL FILM 110M		C633	<b>A</b> 1-107-564-11	FILM 0.22MF 20% 300V	
*****				C634	<b>A</b> 1-107-564-11	FILM 0.22MF 20% 300V	
*A-1642-121-A D BOARD, COMPLETE				C635	<b>A</b> 1-107-564-11	FILM 0.22MF 20% 300V	
*****				C636	<b>A</b> 1-161-742-00	CERAMIC 0.0022MF 20% 400V	
4-201-023-01	SPACER, INSULATING			C639	1-136-165-00	FILM 0.1MF 5% 50V	
4-202-373-01	SPRING, IC			C640	1-106-220-00	MYLAR 0.1MF 10% 100V	
< CAPACITOR >				C647	1-162-116-00	CERAMIC 680PF 10% 2KV	
C502	1-102-824-00	CERAMIC 470PF 5% 50V		C800	1-137-437-11	FILM 0.0056MF 5% 50V	
C503	1-136-165-00	FILM 0.1MF 5% 50V		C801	1-136-153-00	FILM 0.01MF 5% 50V	
C504	1-102-824-00	CERAMIC 470PF 5% 50V		C804	1-136-165-00	FILM 0.1MF 5% 50V	
C506	1-124-480-11	ELECT 470MF 20% 25V		C805	1-106-395-00	MYLAR 0.15MF 10% 200V	
C507	1-124-767-00	ELECT 2.2MF 20% 50V		C806	1-108-704-11	MYLAR 0.1MF 10% 200V	
C509	1-136-165-00	FILM 0.1MF 5% 50V		C807	1-136-111-00	FILM 1MF 5% 200V	
C510	1-124-911-11	ELECT 220MF 20% 50V		C810	1-124-634-11	ELECT 1MF 20% 250V	
C511	1-136-202-11	FILM 0.33MF 5% 63V		C811	1-102-212-00	CERAMIC 820PF 10% 500V	
C513	1-106-220-00	MYLAR 0.1MF 10% 100V		C812	1-136-111-00	FILM 1MF 5% 200V	
				C813	1-136-759-11	FILM 0.039MF 10% 630V	
				C814	1-136-591-11	FILM 0.017MF 3% 1.4KV	
				C815	1-136-562-11	MYLAR 0.0082MF 10% 400V	
				C816	1-161-754-00	CERAMIC 0.001MF 10% 2KV	



D

The components identified by shading and marked \* are critical for safety.  
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
C817	1-161-754-00	CERAMIC 0.001MF 10% 2KV	
C818	1-162-134-11	CERAMIC 470PF 10% 2KV	
C819	1-136-208-11	FILM 0.068MF 10% 250V	
C820	1-102-114-00	CERAMIC 470PF 10% 50V	
C821	1-162-114-00	CERAMIC 0.0047MF 2KV	
C822	1-123-948-00	ELECT 22MF 20% 250V	
C824	1-123-024-21	ELECT 33MF 160V	
C829	1-124-902-00	ELECT 0.47MF 20% 50V	
C830	1-136-165-00	FILM 0.1MF 5% 50V	
C832	1-136-173-00	FILM 0.47MF 5% 50V	
C834	1-126-233-11	ELECT 22MF 20% 25V	
C835	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C836	1-162-117-00	CERAMIC 100PF 10% 500V	
C838	1-102-228-00	CERAMIC 470PF 10% 500V	
C906	1-124-910-11	ELECT 47MF 20% 50V	
C908	1-124-910-11	ELECT 47MF 20% 50V	
C909	1-124-903-11	ELECT 1MF 20% 50V	
C910	1-137-393-91	FILM 0.01MF 5% 100V	
C1200	1-136-165-00	FILM 0.1MF 5% 50V	
C1201	1-136-165-00	FILM 0.1MF 5% 50V	
C1202	1-136-165-00	FILM 0.1MF 5% 50V	
C1203	1-136-169-00	FILM 0.22MF 5% 50V	
C1204	1-136-169-00	FILM 0.22MF 5% 50V	
C1205	1-101-005-00	CERAMIC 0.022MF 50V	
C1206	1-101-005-00	CERAMIC 0.022MF 50V	
C1207	1-126-101-11	ELECT 100MF 20% 16V	
C1208	1-124-927-11	ELECT 4.7MF 20% 50V	
C1209	1-124-927-11	ELECT 4.7MF 20% 50V	
C1210	1-124-925-11	ELECT 2.2MF 20% 50V	
C1211	1-124-925-11	ELECT 2.2MF 20% 50V	
C1214	1-126-101-11	ELECT 100MF 20% 16V	
C1215	1-136-173-00	FILM 0.47MF 5% 50V	
C1216	1-137-366-11	FILM 0.0022MF 5% 50V	
C1217	1-137-366-11	FILM 0.0022MF 5% 50V	
C1218	1-124-120-11	ELECT 220MF 20% 16V	
< CONNECTOR >			
CN600	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN601	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CN602	*1-695-292-11	PIN, CONNECTOR (POWER)	
CN800	*1-580-798-11	CONNECTOR PIN (DY) 6P	
CN803	1-695-915-11	TAB (CONTACT)	
CN804	1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
CN807	1-568-878-51	PIN, CONNECTOR 3P	
CN901	*1-564-520-11	PLUG, CONNECTOR 5P	
CN902	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
CN903	*1-564-516-11	PLUG, CONNECTOR 13P	
CN904	*1-564-509-11	PLUG, CONNECTOR 6P	
CN904	*1-568-881-51	PIN, CONNECTOR 6P	
CN905	*1-564-509-11	PLUG, CONNECTOR 6P	
CN905	*1-568-878-51	PIN, CONNECTOR 3P	
CN1200	*1-568-879-11	PIN, CONNECTOR 4P	
CN1201	*1-568-878-51	PIN, CONNECTOR 3P	
< DIODE >			
D500	8-719-109-85	DIODE RD5.1ESB2	
D502	8-719-979-85	DIODE EGP20G	
D503	8-719-979-85	DIODE EGP20G	
D504	8-719-901-33	DIODE 1SS133	
D505	8-719-982-03	DIODE MTZJ-3.6A	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D506	8-719-901-33	DIODE 1SS133	
D507	8-719-109-85	DIODE RD5.1ESB2	
D600	8-719-510-53	DIODE D4SB60L	
D601	8-719-046-77	DIODE EM1-V1	
D603	8-719-109-97	DIODE RD6.8ESB2	
D604	8-719-046-75	DIODE EU-1-V1	
D605	8-719-312-61	DIODE EU-1Z	
D606	8-719-312-61	DIODE EU-1Z	
D607	8-719-046-78	DIODE EG-1Z-V1	
D608	8-719-046-75	DIODE EU-1-V1	
D609	8-719-301-64	DIODE RU4DS	
D610	8-719-046-74	DIODE AU-01Z-V1	
D611	8-719-302-43	DIODE EL1Z	
D612	8-719-046-76	DIODE RU-3YX-V1	
D613	8-719-302-43	DIODE EL1Z	
D614	8-719-302-43	DIODE EL1Z	
D615	8-719-046-75	DIODE EU-1-V1	
D616	8-719-110-03	DIODE RD7.5ESB2	
D617	8-719-901-33	DIODE 1SS133	
D618	8-719-901-33	DIODE 1SS133	
D619	8-719-901-33	DIODE 1SS133	
D620	8-719-901-33	DIODE 1SS133	
D622	8-719-921-69	DIODE MTZJ-9.1	
D625	8-719-901-33	DIODE 1SS133	
D626	8-719-046-74	DIODE AU-01Z-V1	
D800	8-719-901-33	DIODE 1SS133	
D801	8-719-901-33	DIODE 1SS133	
D802	8-719-901-33	DIODE 1SS133	
D803	8-719-908-03	DIODE GP08D	
D807	8-719-302-43	DIODE EL1Z	
D808	8-719-908-03	DIODE GP08D	
D809	8-719-018-82	DIODE RGP02-20EL-6394	
D810	8-719-302-43	DIODE EL1Z	
D812	8-719-038-49	DIODE FMS-3FU-LF027-103	
D815	8-719-908-03	DIODE GP08D	
D817	8-719-109-89	DIODE RD5.6ESB2	
D902	8-719-921-69	DIODE MTZJ-9.1	
D903	8-719-921-69	DIODE MTZJ-9.1	
D904	8-719-921-69	DIODE MTZJ-9.1	
D905	8-719-921-69	DIODE MTZJ-9.1	
D906	8-719-921-69	DIODE MTZJ-9.1	
D1201	8-719-109-72	DIODE RD3.9ESB2	
D1202	1-247-807-31	CARBON 100 5% 1/4W	
< FERRITE BEAD >			
FB600	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB606	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB607	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
< IC >			
IC500	8-759-192-71	IC STV9379	
IC600	8-759-183-88	IC STR-S6708	
IC601	*8-749-924-92	IC TLP721(D4)-GR	
IC602	8-749-923-26	IC SE135N-LF12	
IC603	8-759-925-54	IC LM2940CT-5.0	
IC604	8-759-250-63	IC TL750L05CLPR	

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
IC605	8-759-701-79	IC NJM7812FA		R510	1-249-443-11	CARBON	0.47 5% 1/4W F
IC606	8-759-267-25	IC LM2940T-90		R511	1-215-427-00	METAL	1.8K 1% 1/4W
IC800	8-759-103-93	IC UPC393C		R518	1-215-427-00	METAL	1.8K 1% 1/4W
IC1200	8-759-279-43	IC TDA7261		R520	1-215-457-00	METAL	33K 1% 1/4W
IC1201	8-759-502-21	IC TDA2822M		R521	1-215-459-00	METAL	39K 1% 1/4W
				R522	1-249-433-11	CARBON	22K 5% 1/4W
L502	1-412-519-11	INDUCTOR 3.3UH		R523	1-249-433-11	CARBON	22K 5% 1/4W
L503	1-412-519-11	INDUCTOR 3.3UH		R524	1-249-425-11	CARBON	4.7K 5% 1/4W
L609	1-412-533-21	INDUCTOR 47UH		R525	1-249-425-11	CARBON	4.7K 5% 1/4W
L611	1-412-527-11	INDUCTOR 15UH		R526	1-249-421-11	CARBON	2.2K 5% 1/4W
L612	1-414-415-11	INDUCTOR, WIDE BAND		R527	1-215-449-00	METAL	15K 1% 1/4W
L613	1-414-415-11	INDUCTOR, WIDE BAND		R528	1-259-877-11	CARBON	1.2M 5% 1/4W
L801	1-459-111-00	COIL, DRAM CORE (CDI)		R529	1-247-895-00	CARBON	470K 5% 1/4W
L802	1-459-104-00	COIL, WITH CORE		R600	1-216-490-71	METAL OXIDE	39K 5% 3W F
L803	1-420-872-00	COIL, AIR CORE		R601	1-249-417-11	CARBON	1K 5% 1/4W
L804	1-409-770-11	COIL, HORIZONTAL LINEARITY		R603	1-215-875-11	METAL OXIDE	10K 5% 1W F
L805	1-406-675-11	COIL, CHOKE 4.7MMH		R604	1-249-420-11	CARBON	1.8K 5% 1/4W
L809	1-412-533-21	INDUCTOR 47UH		R605	1-216-362-71	METAL OXIDE	0.27 5% 2W F
	< IC LINK >			R607	1-216-421-71	METAL OXIDE	12 5% 1W F
PS600	1-532-686-21	LINK, IC 2.7A (ICP-F75)		R608	1-216-365-00	METAL OXIDE	0.47 5% 2W F
PS601	1-532-686-21	LINK, IC 2.7A (ICP-F75)		R610	1-249-417-11	CARBON	1K 5% 1/4W
PS602	1-532-686-21	LINK, IC 2.7A (ICP-F75)		R611	1-215-859-00	METAL OXIDE	22 5% 1W F
PS603	1-532-686-21	LINK, IC 2.7A (ICP-F75)		R612	1-249-428-11	CARBON	8.2K 5% 1/4W
PS801	1-532-605-00	LINK, IC 0.4A (ICP-F10)		R613	1-249-417-11	CARBON	1K 5% 1/4W
	< TRANSISTOR >			R614	1-215-877-11	METAL OXIDE	22K 5% 1W F
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE		R615	1-249-435-11	CARBON	33K 5% 1/4W
Q502	8-729-173-38	TRANSISTOR 2SA733-K		R616	1-215-479-00	METAL	270K 1% 1/4W
Q503	8-729-900-89	TRANSISTOR DTC144ES		R617	1-215-901-00	METAL OXIDE	33K 5% 2W F
Q601	8-729-025-05	TRANSISTOR 2SC3852A-0		R618	1-249-429-11	CARBON	10K 5% 1/4W
Q602	8-729-320-28	TRANSISTOR 2SA1667		R619	1-216-425-11	METAL OXIDE	56 5% 1W F
Q603	8-729-027-08	TRANSISTOR 2SC2389STP-R		R620	1-247-895-00	CARBON	470K 5% 1/4W
Q604	8-729-024-35	TRANSISTOR 2SC2808STP-R		R621	1-216-425-11	METAL OXIDE	56 5% 1W F
Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE		R622	1-249-437-11	CARBON	47K 5% 1/4W
Q606	8-729-900-65	TRANSISTOR DTA144ES		R623	1-249-429-11	CARBON	10K 5% 1/4W
Q607	8-729-119-78	TRANSISTOR 2SC2785-HFE		R624	1-249-405-11	CARBON	100 5% 1/4W F
Q800	8-729-119-78	TRANSISTOR 2SC2785-HFE		R625	1-249-434-11	CARBON	27K 5% 1/4W
Q801	8-729-017-06	TRANSISTOR 2SC4793		R626	1-249-430-11	CARBON	12K 5% 1/4W
Q802	8-729-016-32	TRANSISTOR 2SC4927-01		R628	1-249-415-11	CARBON	680 5% 1/4W F
Q803	8-729-119-80	TRANSISTOR 2SC2688-LK		R629	1-214-937-00	CARBON	1M 5% 1/2W
Q805	8-729-900-89	TRANSISTOR DTC144ES		R630	1-218-265-11	METAL GLAZE	8.2M 5% 1W
Q1200	8-729-119-78	TRANSISTOR 2SC2785-HFE		R631	1-205-949-11	WIREWOUND	1.8 5% 10W
Q1201							

The components identified by shading and marked \* are critical for safety.  
Replace only with the part number specified.

D

H2

H1

REF.NO.	PART NO.	DESCRIPTION	REMARK
R802	1-249-431-11	CARBON 15K 5%	1/4W
R803	1-249-426-11	CARBON 5.6K 5%	1/4W
R804	1-249-430-11	CARBON 12K 5%	1/4W
R805	1-249-425-11	CARBON 4.7K 5%	1/4W
R809	1-247-901-11	CARBON 820K 5%	1/4W
R812	1-249-421-11	CARBON 2.2K 5%	1/4W
R813	1-215-869-11	METAL OXIDE 1K 5%	1W F
R814	1-249-411-11	CARBON 330 5%	1/4W
R816	1-215-918-00	METAL OXIDE 1.5K 5%	3W F
R817	1-215-918-00	METAL OXIDE 1.5K 5%	3W F
R818	1-215-882-00	METAL OXIDE 22 5%	2W F
R819	1-216-345-11	METAL OXIDE 0.47 5%	1W F
R820	1-249-403-11	CARBON 68 5%	1/4W
R821	1-215-909-11	METAL OXIDE 47 5%	3W F
R822	1-215-868-00	METAL OXIDE 680 5%	1W F
R824	1-249-420-11	CARBON 1.8K 5%	1/4W
R826	1-247-752-11	CARBON 1K 5%	1/2W
R827	1-249-425-11	CARBON 4.7K 5%	1/4W
R828	1-249-433-11	CARBON 22K 5%	1/4W
R829	1-215-463-00	METAL 56K 1%	1/4W
R830	1-217-778-11	FUSIBLE 1K 5%	1W F
R833	1-249-421-11	CARBON 2.2K 5%	1/4W F
R836	1-249-439-11	CARBON 68K 5%	1/4W
R837	1-215-449-00	METAL 15K 1%	1/4W
R840	1-247-807-31	CARBON 100 5%	1/4W
R841	1-249-418-11	CARBON 1.2K 5%	1/4W
R842	1-249-441-11	CARBON 100K 5%	1/4W
R843	1-247-903-00	CARBON 1M 5%	1/4W
R846	1-249-441-11	CARBON 100K 5%	1/4W
R847	1-247-891-00	CARBON 330K 5%	1/4W
R848	1-247-887-00	CARBON 220K 5%	1/4W
R849	1-249-429-11	CARBON 10K 5%	1/4W
R850	1-249-425-11	CARBON 4.7K 5%	1/4W
R851	1-247-755-11	CARBON 1.8K 5%	1/2W F
R852	1-249-432-11	CARBON 18K 5%	1/4W
R901	1-202-539-00	SOLID 39 10%	1/2W
R902	1-202-539-00	SOLID 39 10%	1/2W
R907	1-247-804-11	CARBON 75 5%	1/4W
R916	1-249-397-11	CARBON 22 5%	1/4W
R917	1-249-397-11	CARBON 22 5%	1/4W
R1200	1-249-425-11	CARBON 4.7K 5%	1/4W
R1201	1-249-434-11	CARBON 27K 5%	1/4W
R1202	1-249-393-11	CARBON 10 5%	1/4W F
R1203	1-249-421-11	CARBON 2.2K 5%	1/4W
R1204	1-249-421-11	CARBON 2.2K 5%	1/4W
R1205	1-249-428-11	CARBON 8.2K 5%	1/4W
R1206	1-249-428-11	CARBON 8.2K 5%	1/4W
R1207	1-249-417-11	CARBON 1K 5%	1/4W
R1208	1-212-849-00	FUSIBLE 4.7 5%	1/4W F
R1209	1-212-849-00	FUSIBLE 4.7 5%	1/4W F
R1210	1-249-417-11	CARBON 1K 5%	1/4W
R1211	1-249-424-11	CARBON 3.9K 5%	1/4W
R1212	1-249-424-11	CARBON 3.9K 5%	1/4W
R1213	1-249-421-11	CARBON 2.2K 5%	1/4W
R1216	1-249-413-11	CARBON 470 5%	1/4W
R1217	1-249-425-11	CARBON 4.7K 5%	1/4W
< VARIABLE RESISTOR >			
RV301	1-238-552-11	RES, ADJ, CARBON 470K	

REF.NO.	PART NO.	DESCRIPTION	REMARK
< RELAY >			
RY600	1-515-720-31	RELAY	
< SPARK GAP >			
SG801	1-519-422-11	GAP, SPARK	
< TRANSFORMER >			
LF600	1-421-776-11	LFT	
LF601	1-421-776-11	LFT	
T601	1-426-805-11	TRANSFORMER	
T800	1-421-794-21	TRANSFORMER, FERRITE (PMT)	
T803	1-453-169-11	FBT ASSY (UX-1604A2)	
T804	1-437-090-00	HDT	
< THERMISTOR >			
THP600	1-809-827-11	THERMISTOR, POSITIVE	
*****			
*1-652-269-11 H2 BOARD			
*****			
< CAPACITOR >			
C904	1-124-910-11	ELECT 47MF	20% 50V
C905	1-124-907-11	ELECT 10MF	20% 50V
< CONNECTOR >			
CN907	*1-564-509-11	PLUG, CONNECTOR 6P	
CN907	*1-568-881-51	PIN, CONNECTOR 6P	
< DIODE >			
D901	8-719-030-11	DIODE SLA-570KT3F	
< IC >			
IC900	8-741-790-11	IC SBX1790-11	
< RESISTOR >			
R900	1-249-409-11	CARBON 220 5%	1/4W
R908	1-249-401-11	CARBON 47 5%	1/4W
*****			
*1-652-275-11 H1 BOARD			
*****			
< CAPACITOR >			
C900	1-101-810-00	CERAMIC 100PF	5% 500V
C902	1-137-372-11	FILM 0.022MF	5% 50V
C903	1-137-372-11	FILM 0.022MF	5% 50V
C907	1-124-903-11	ELECT 1MF	20% 50V
< CONNECTOR >			
CN900	1-569-793-11	TERMINAL BLOCK, S 3P	
CN906	*1-564-516-11	PLUG, CONNECTOR 13P	
< SOCKET >			
J900	1-764-606-11	JACK	

H1

H3

The components identified by shading and marked  $\Delta$  are critical for safety.  
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
< COIL >				ACCESSORIES AND PACKING MATERIALS			
L900	1-408-409-00	INDUCTOR	10UH	*****			
L901	1-408-409-00	INDUCTOR	10UH	1-202-829-41	MANUAL INSTRUCTION (KV-M2541A)		
L903	1-408-409-00	INDUCTOR	10UH	1-202-829-51	MANUAL INSTRUCTION (KV-M2540B)		
< RESISTOR >				1-202-829-11	MANUAL INSTRUCTION (KV-M2540D/M2541D)		
R905	1-247-804-11	CARBON	75 5% 1/4W	1-202-829-81	MANUAL INSTRUCTION (KV-M2540E)		
R906	1-247-804-11	CARBON	75 5% 1/4W	1-202-829-71	MANUAL INSTRUCTION (KV-M2541E)		
R910	1-249-437-11	CARBON	47K 5% 1/4W	1-202-829-91	MANUAL INSTRUCTION (KV-M2540K/M2541K)		
R915	1-249-397-11	CARBON	22 5% 1/4W	1-202-829-61	MANUAL INSTRUCTION (KV-M2541L/M2541U)		
*****				*4-384-027-01	BAG, PROTECTION		
*1-652-270-11	H3 BOARD			*4-200-647-12	CUSHION (UPPER) (ASSY)		
	*****			*4-200-648-13	CUSHION (LOWER) (ASSY)		
< CONNECTOR >				*4-202-212-01	INDIVIDUAL CARTON		
CN908	*1-564-506-11	PLUG, CONNECTOR 3P		REMOTE COMMANDER			
CN908	*1-568-878-51	PIN, CONNECTOR 3P		*****			
< RESISTOR >				1-467-706-11	COMMANDER (RM-833)		
R911	1-249-423-11	CARBON	3.3K 5% 1/4W	*****			
R912	1-249-429-11	CARBON	10K 5% 1/4W				
R913	1-249-423-11	CARBON	3.3K 5% 1/4W				
R914	1-249-429-11	CARBON	10K 5% 1/4W				
< SWITCH >							
S900	1-692-979-11	SWITCH, TACTILE					
S901	1-692-979-11	SWITCH, TACTILE					
S902	1-692-979-11	SWITCH, TACTILE					
*****							
MISCELLANEOUS							
*****							
$\Delta$	1-402-746-11	COIL, DEGAUSSING					
$\Delta$	8-451-311-34	DEFLECTION YOLK (Y25FXA)					
	1-504-698-11	SPEAKER					
	1-452-032-00	MAGNET, DISK; 10MM					
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM					
$\Delta$	1-751-680-11	CORD POWER (WITH NOISE FILTER)					
		(KV-M2541A/M2540D/M2541D)					
$\Delta$	1-590-460-11	CORD POWER (WITH CONNECTOR)					
		(KV-M2540B/M2540E/M2541E/					
		M2540K/M2541K)					
$\Delta$	1-590-762-11	CORD POWER (WITH PLUG)					
		(KV-M2541U/M2541L)					
1-693-185-11	TUNER (UV916H)	(KV-M2541A/M2540B/					
		M2540D/M2541D/M2540E/M2541E/					
		M2541L/M2540K/M2541K)					
1-693-184-11	TUNER (U944C)	(KV-M2541U)					
1-453-169-11	FBT ASSY (UX1604A2)						
V901 $\Delta$	8-733-231-05	CRT SD-178 (A59JWC61X)					